

Parenting Adolescents Following a Natural Disaster: Evaluation of Group Teen
Triple-P in Post-earthquake Christchurch, New Zealand.

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Abstract

Programme interventions for people who have experienced natural disasters are limited. To investigate whether Group Teen Positive Parenting (GTPPP) programme promoted family functioning in the aftermath of disaster, 14 parents and nine adolescents, self-reported measures of family functioning and adjustment prior to and after the intervention. It was found that GTPPP enhanced parenting competence, parental wellbeing, decreased conflict between parents and their adolescents. These findings suggest that GTPPP may provide a practical way of supporting families after a natural disaster.

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Parenting adolescents following a natural disaster: Evaluation of Group Teen Triple-P in
Post-earthquake Christchurch, New Zealand.

Chapter One

Introduction

Potentially traumatic events (PTE), such as natural disasters can leave families feeling alone, overwhelmed, and less able to maintain vital family functions (McFarlane, 1987). The region of Canterbury, New Zealand and its major city, Christchurch, (population ~ 400,000) experienced two large magnitude earthquakes in September 2010 and February 2011. The earthquake in February 2011 resulted in 185 deaths, 1500-2000 injuries, approximately 10,000 homes damaged to the extent they were required to be demolished (Davey, 2011; Newell, Johnston, & Beaven, 2012). There were more than 361 aftershocks the week following the 6.3 magnitude earthquake in February 2011 (GeoNet, 2016). To date the region has experienced more than 10,000 aftershocks following the 7.1 magnitude earthquake in September of 2010 (GeoNet, 2016). The large and on-going effects of the Canterbury earthquake sequences has exposed over 400,000 people to potentially traumatic events (UNdata, 2011).

In 2012, one year following the Canterbury earthquake sequences, the Canterbury Earthquake Recovery Authority (CERA) implemented the Canterbury Wellbeing Index Survey. The index was initiated by social sector agencies and sought to track the progress of social recovery and provide early warning of emerging social trends and issues to enable CERA and partner agencies to respond quickly to the needs to Canterbury residents (Canterbury Earthquake Recovery Authority, 2013). The CERA (2012) report captured self-reported wellbeing data from 2,381 residents. The key findings from this report suggested more than half (54%) of residents believed that as a direct result of the earthquakes their

quality of life had decreased significantly or decreased to some extent. Nearly a quarter (23%) of residents expressed living with stress for most or all of the time over the past year (CERA, 2012).

Two years after the major Canterbury earthquake a CERA initiated youth wellbeing survey, of 3,341 12-24 year olds, found 46% of youth indicated that they had moved house since the September 2011 earthquake and 29% indicated they had moved schools. Youth were also asked to report issues that were having a continuing negative effect on their everyday lives. Seventeen percent of adolescents reported dealing with family members angry or upset about insurance issues, 13% worried about aftershocks, 12% were uncertain about their family's future in Canterbury and 11% were experiencing family relationship problems (CERA, 2013a). The same year Fleming et al. (2013) explored the life satisfaction, self-harming behaviour and overall wellbeing of students in and out of Christchurch. Christchurch students reported slightly higher rates of self-harm (26% vs. 24%), suicidal ideation (17% vs. 16%) and reports of feeling worried (24% vs. 22%) than students located outside of Christchurch. Another CERA Wellbeing Report in 2013 found stress levels remained relatively high and unchanged from those previously reported in September 2012 (CERA, 2013b).

Individual responses to potentially traumatic events have been well researched (Ballenger et al., 2004; Bonanno, 2004; Schuster et al., 2001; Sundin & Horowitz, 2002). Recent research by Bonanno (2004) proposed four prototypical outcome trajectories following potentially traumatic events: resilience, recovery, chronic distress and delayed reactions. In a study of New York 9/11 survivors Bonanno (2005) found resilience, a stable trajectory of healthy psychological and physical functioning following a PTE, characterised 46% of participants (Bonanno, Westphal, & Mancini, 2011). Recovery, elevated stress symptoms and functional impairment after the PTE, followed by a gradual return to baseline functioning,

characterised 23% of participants (Bonanno, 2005; Bonanno et al., 2011). Chronic distress, chronic psychopathology following exposure to a PTE, was estimated not to exceed 30% of participants (Bonanno et al., 2011). Lastly, delayed reactions, delayed onset of post-traumatic stress symptoms followed by moderate increases in distress levels, accounted for 13% (Bonanno et al., 2011). The study by Bonanno (2005) supports the findings of the CERA Wellbeing reports, that despite their exposure to PTE's a majority of Christchurch residents experienced no more than minor distress. However, less resilient residents may continue to experience on-going issues that have negative effects on their everyday lives without intervention (Gewirtz, Forgatch, & Wieling, 2008).

Indeed, some Canterbury men and woman have reported negative impacts of the major Canterbury earthquake (All Right?, 2013). Self-reports in response to the Christchurch Wellbeing Communication Campaign suggested some women had experiences of despair, depression, anxiety and trauma while men were more likely to report experiencing anger (All Right?, 2013). Both men and women reported a sense of "trying to hold it together", but when this failed women reported breaking down and crying while men reported sometimes becoming angry or 'exploding' (All Right?, 2013). Those with older children (over five) reported additional negative experiences including tiredness, tense relationships, job insecurity, financial problems and illness – some also expressed feelings of disempowerment and anger over plans for changes to schools (All Right?, 2013). In a summary of the greater Christchurch Wellbeing Communication Campaign research findings in 2013, fifty-five percent of greater Christchurch residents who completed self-report questionnaires 'strongly agreed' that they had all the support they needed to cope with the personal impact of the earthquakes, however 45% reported they might be in need of additional support (All Right?, 2013). Potentially traumatic events like earthquakes are known to disrupt social systems (Bonanno & Mancini, 2012; Gee & Casey, 2015; Gewirtz et al., 2008). As a consequence,

Christchurch families were arguably at increased risk of maladaptive parenting cycles and poor family wellbeing and adjustment (National Research Council and Institute of Medicine, 2009; Stallman & Ralph, 2007).

How families function in the aftermath of PTE is important for family resilience and maintenance of positive family wellbeing and adjustment (McDermott & Cobham, 2012). Interventions that promote healthy social interactions through skills, such as those listed previously, will lead to better adjustment for all family members (Epstein, Baldwin, & Bishop, 1983; Patterson, 2002; Scaramella, Sohr-Preston, Callahan, & Mirabile, 2008). Indeed empirical evidence suggests the quality of parenting practices following PTEs mediates relationships between trauma and child adjustment (Cobham & McDermott, 2014).

Poor parent-adolescent relationships and low parental monitoring of their children has a well-established relationship with increased adolescent psychopathy and distress. Experiences of adolescent psychopathy and distress can decrease future opportunities, increasing the likelihood of incarceration, decrease academic performance, decrease overall wellbeing and increase risk of harm from risky decisions (Deković, Janssens, & Van As, 2003). Not only can family intervention enhance family and parental adjustment it is also able to provide protective properties to children, potentially enhancing adolescent adjustment. Adolescent psychopathy and distress is, therefore, malleable via changes to parent-adolescent relationships and parental behaviour (e.g., parental monitoring) (National Research Council and Institute of Medicine, 2009; Stallman & Ralph, 2007). Reducing adolescent psychopathy and distress before adolescents are at risk of negative life outcomes (e.g., experience of the criminal justice system) may provide a more cost-effective alternative to clinic-based care or imprisonment (Church, 2003). This evidence suggests parenting interventions for Christchurch residents would be productive to their recovery, and provide a cost-effective

means of altering potentially adverse adolescent development trajectories after the Canterbury earthquake sequences.

Many empirically based parenting programs follow social learning theory (SLT) principles that highlight the bidirectional relationship between parents and adolescents and specify that addressing mechanisms which maintain coercive and dysfunctional patterns of behaviour is vital (Patterson, Reid, & Dishion, 1992). An empirically based parenting program with a support base of research is the Positive Parenting Program (Triple P). Triple P follows SLT principles and teaches parents positive child management skills as an alternative to maladaptive and coercive processes (Eyeberg et al. 2008; Patterson, 1982; Sanders, 1996; Sanders, Markie-Dadds & Turner, 2003). Targeting adolescents who are tracking for negative outcomes, such as delinquency, school failure and imprisonment, before they occur is favourable both for the adolescent, their family and the community (Frick & Viding, 2009). However, research has often focused on the effect of parenting programs with pre-adolescent children leaving the evidence base for the effectiveness of parenting programs with adolescents comparatively lacking (Eyeberg, 2008). A promising parenting program for parents of adolescents is Group Teen Triple Positive Parenting Program (GTPPP). Group Teen Positive Parenting Program (GTPPP) is a level four, intensive group intervention consisting of eight sessions. GTPPP is a positive parenting programme for parents whose teenagers have more severe behaviour difficulties. The aim of the program is to increase parental competence and confidence in raising (Ralph & Sanders, 2005).

The Christchurch earthquake sequences and increased stressors may have exacerbated maladaptive parenting cycles in Christchurch families. Without appropriate intervention to break cycles of maladaptive behaviour and interactions Christchurch families are at increased risk of negative long-term outcomes (Cobham & McDermott, 2014; McDermott & Cobham, 2012; Patterson, 2002). In response to the Christchurch earthquakes the Ministry of

Education, in a joint mental health action plan with the Christchurch District Health Board (CDHB), have trained counsellors and are facilitating Christchurch school counsellors to offer Group Teen Triple P to the community. As a result, the Ministry of Education offered the University of Canterbury the opportunity to evaluate the effectiveness of Group Teen Triple P for Christchurch families (parents and their adolescent children) who may have experienced the Christchurch earthquakes. The purpose of this study was to measure the effectiveness of Group Teen Triple P in this post-disaster context.

To support understanding of the research context the direct consequences of the Canterbury earthquakes will be described. To understand the support residents required the psychological effects of PTEs, particularly earthquakes, will be briefly described. To provide background for the present study families responses to PTE and the impact of PTEs on family functioning will be summarised. The New Zealand context and evidence base will be described and the possible contributions of the earthquakes will be discussed. The mechanisms affecting family wellbeing and adjustment will be described from a social interaction learning perspective within an ecological framework. Next, literature on empirically based parenting programs will be reviewed.

Canterbury Earthquakes: an Overview.

As a result of the Canterbury earthquake sequences over 400,000 residents were exposed to PTEs. The direct impact of the earthquake on their or members of their family's wellbeing most immediately impacted Canterbury residents. Immediate impacts on wellbeing included psychological responses to the earthquake (i.e., stress or fright), and physical injury or death (Boon et al. 2012). After the immediate personal impacts of the earthquakes residents had to respond quickly to the physical damage surrounding them. Some residents had to abandon their homes due to rock fall, liquefaction, and structural damage to buildings. After the earthquake in September 2011 100,000 of 160,000 homes in the Christchurch,

Selwyn and Waimakariri areas had sustained some damage, with over 430 homes requiring demolition (News, 2010). Ministry of Business, Innovation and Employment (MBIE) (2013) estimated that the eventual loss of residential homes as a result of the earthquakes was around 6 percent (Goodyear, 2014). Some residents who stayed in their home had loss of or intermittent access to safe drinking water, sewerage and/or electricity (Ministry of Health, 2012). The Ministry of Civil Defence and Emergency Management estimated that there was no drinking water supply to 80% of the city the day after the earthquake (approx. 300,000 people), this reducing to 50% of people after three days and 20% of people after 14 days (Christchurch City Council, 2011).

Residential and Industrial red zones were established on land either so badly damaged by the earthquakes it was unlikely it could be rebuilt for a prolonged period, or where residents were at risk of physical harm, i.e. from rock fall (Canterbury Earthquake Recovery Authority, 2015). The entire Christchurch CBD was shut down after the magnitude 6.3 earthquake in February 2011 and over 181 businesses relocated (Kemp, Chan, & Grimm, 2013). Therefore, some working residents found that their home or place of work was no longer operating due to extensive building damage, or 'red zoning'. This resulted in a large displacement of people both at work and at home. In addition, some homes and workplaces that were occupied following the Canterbury earthquakes were not fit for purpose, increasing stressors in both home and work environments. Families were faced with additional adversity as the Government named thirteen schools to close and eighteen schools to merge as a result of the Canterbury earthquakes (RadioNZ, 2012).

Social support networks were interrupted as a result of residents, neighbours, friends or extended family or work places relocating away from their established networks. Residents (34%) reported the loss of other recreational, cultural and leisure time facilities (cafes, restaurants, libraries, marae, arts and cultural centres) had a moderate or major negative

impact on their everyday lives (CERA, 2013b). In the 2013 Youth Wellbeing Survey the three issues most likely to still be having a moderate or major negative impact on young people's everyday lives were the loss of other places they used to go (25%) and loss of sports and recreation facilities (18%) (CERA, 2013a). However, those least likely to agree were those who were not living at the same address compared to where they were living before the earthquake on 4th of September 2010 (43%) or aged 18 to 24 (38%) (CERA, 2013a).

At the beginning of 2014 it emerged that Initial 'reactionary' positive outcomes were reported in the year after the earthquake, including pride in the ability to cope, renewed appreciation of life, heightened sense of community, spending more time with family and increased resilience dissipated with time (CERA, 2014). Twenty-seven percent of youth, and twenty-two percent of adults, reported they were still experiencing stress always or most of the time in way that moderately or significantly impacted them every day with 27% of youth reporting that they had experienced stress always or most of the time as a direct result of the earthquake (CERA, 2014). CERA (2014) suggests resilience dissipation may be due to residents' perceptions of lack of progress, frustration of being in a damaged environment, transport related pressures and loss of recreation facilities. The three most prevalent positive impacts residents reported as continuing to have a strong (moderate or major) positive impact on everyday lives of were: renewed appreciation of life, 45 per cent (2012), 33% (April, 2013), 29% (Sept, 2013), 27% (April, 2014); identify a sense of pride in their ability to cope under difficult circumstances, 41 per cent (Sept. 2012), 26% (April. 2013), 24% (Sept, 2013), 22% (April, 2014); increased resilience, 36% (Sept. 2012), 23% (April 2013), 24% (Sept, 2013), 21% (April, 2014) (CERA, 2014). This suggests that how residents responded in the aftermath of disaster was not only affected by their individual and family factors but also impacted by long-term housing, social, economic, and physical factors (Boon, Cottrell, King, Stevenson, & Millar, 2012; Bronfenbrenner, 1988).

Individual responses to the Canterbury earthquakes have been mediated through unique reciprocal relationships between residents and their environment. This has in part contributed towards differentiated responses to the earthquakes, including the likelihood of resiliency (Ballenger et al., 2004; Bonanno, 2004; Schuster et al., 2001; Sundin & Horowitz, 2002). For those families not displaying resilient characteristics intervention may be required to promote family wellbeing and adjustment (Bonanno, 2004).

The Psychological Effects of Potentially Traumatic Events: on Parents and Adolescents

The negative impacts of natural disasters, for those they affect, have been well established (Boon et al., 2012). Although many adults do not experience long-term negative affects from PTEs, empirical evidence suggests that up to 30% of adults show psychological problems following PTEs, including PTSD, grief, depression, anxiety, stress-related health problems, substance abuse and suicidal ideation (G. A. Bonanno, C. Brewin, K. Kaniasty, & A. La Greca, 2010; Bonanno & Mancini, 2012; Kar & Bastia, 2006; La Greca, Silverman, & Wasserstein, 1998; Lonigan, Shannon, Finch, Daugherty, & Taylor, 1991; McFarlane, Van Hooff, & Goodhew, 2009; Raphael & Maguire, 2009; Weems et al., 2007; Yule et al., 2000).

Fan, Zhang, Yang, Mo, and Liu (2011) examined the anxiety and depression symptoms of 2,250 adolescents six months after the 2008 Wenchuan earthquake in China. They found that 16%, 41% and 25% of participants reported clinical symptoms of PTSD, anxiety, and depression, respectively. McLaughlin, Fairbank, Gruber, Jones, Lakoma, Pfefferbaum, Sampson & Kessler (2009) sought to estimate the prevalence of serious emotional disturbance among children and adolescents exposed to Hurricane Katrina 18-27 months after the disaster. Seven hundred and seven children and adolescents, aged 4-17, were surveyed on hurricane-related stressors, lifetime history of psychopathology, and child serious emotional disturbance using the strengths and difficulties questionnaire (SDQ) via telephone. The estimated prevalence of serious emotional disturbance attributable to

Hurricane Katrina was 9% of a total of 15%. Stress exposure was highly associated with serious emotional disturbance, and 20% of youth with high stress exposure has hurricane-attributable serious emotional disturbance (McLaughlin et al., 2009). Evidence from McLaughlin et al. (2009) suggests natural disasters may significantly impact adolescents' positive adjustment up to 27 months post-disaster.

In addition, evidence suggests PTEs can also increase rates of adolescent externalising disorders; as defined as problem behaviours directed toward the external environment (March, Amaya-Jackson, Terry, & Costanzo, 1997; Udwin, Boyle, Yule, Bolton, & O'Ryan, 2000). Reijneveld, Crone, Verhulst, and Verloove-Vanhorick (2003) evaluated the pre-disaster and post-disaster data for affected and control samples to assess the impact of the Volendam café fire (Netherlands) on mental health and substance of adolescents. The Volendam café fire resulted in 250 adolescents wounded and 14 killed. They found Volendam adolescents had larger increases in clinical scores for total problems, including being anxious or depressed, incoherent thinking and aggressive behaviour, than control and excessive use of alcohol (Reijneveld et al., 2003). Similarly, Grych, Jouriles, Swank, McDonald, and Norwood (2000) reported on a 6-month longitudinal study of 6-12 year old children's adjustment during and following their stay in a battered women's shelter, finding externalising symptoms remained stable but distress symptoms decreased significantly by six months.

Additionally, very recent research suggests Bonannos' (2004) prototypical projectory model for adults may also apply to adolescents. Qin et al. (2016) completed a longitudinal study which examined the developmental trajectories of prosocial behaviour and related predictors among 1,573 adolescents exposed to the 2008 Wenchuan earthquake at 6, 18 and 30 months post-earthquake. Adolescents earthquake exposure, post-earthquake negative life events, prosocial behaviour, symptoms of posttraumatic stress disorder, depression, anxiety,

social support, and coping style were self-reported (Qin et al., 2016). Four trajectories of post-earthquake prosocial behaviour were identified in the sample: (a) high/enhancing (35.0%), (b) high/stable (29.4%), (c) low/declining (34%) and (d) low/steeply declining (2.0%) (Qin et al., 2016). Female gender, more social support and greater positive coping were significant factors related to high probability of developing the high/enhancing trajectory (Qin et al., 2016). This supports growing consensus that although some people do suffer from negative consequences, some people can adjust well and even achieve post-traumatic growth with positive changes in mental and social functioning (Linley & Joseph, 2004; Tedeschi & Calhoun, 2004).

The Psychological Effects of Potentially Traumatic Events: Impact on Families

The influences on family function and adjustment are varied and complex due to reciprocal relationships between family dyads (Boon et al., 2012; Bronfenbrenner, 1988; Holden & Miller, 1999). Parents and adolescents do not operate in isolation; a series of reciprocal relationships both impact on the family and operate within it. Family functioning according to the McMaster Family Assessment Model is affected by five key elements: behaviour control, communication, effective responses, problem-solving and active achievement (Epstein et al., 1983; McElhaney, Allen, Stephenson, & Hare, 2009). A disruption to parents, adolescents, or both may significantly impact family functioning. McDermott and Cobham (2012) investigated the impact of natural disasters of family functioning through evaluating families three months after a category five tropical cyclone in north Queensland, Australia. McDermott and Cobham (2012) found that, on 145 families of children aged eight to 12 years, 28% met criteria for dysfunction on the Family Adjustment Device, double the frequency in a community sample.

Post-Disaster Parenting.

Well-established empirical evidence suggests appropriate parenting has one of the largest effects of positive family function. Few published studies have specifically measured the contribution of parenting practices to children's adjustment after PTEs (Gewirtz et al., 2008). However a small quantum of recent research suggests PTEs do indeed result in a change in parenting for some families (Costa, Weems, & Pina, 2009). McDermott and Cobham (2014) explored changes in parenting following a severe storm. Cobham and McDermott (2014) utilised a cross-sectional design and explored whether parents' perceived their parenting practices to have altered following the natural disaster. Participants were parents of 874 elementary school children ages 8-12 years. Screening was completed three months after the storm. Cobham and McDermott (2014) found parents perceived their parenting practices to have become more protective, granting less autonomy to their children and communicating a sense of danger which was found to be associated with child posttraumatic stress disorder. Although the authors caution about assuming a link between anxious parenting and child posttraumatic stress, they suggest parenting practices may be important targets for intervention to reduce/prevent childhood posttraumatic stress. Indeed empirical evidence such as that of Cobham and McDermott (2014) suggests the quality of parenting practices following PTEs mediates the relationship between trauma and family and child adjustment (Cobham & McDermott, 2014).

Further, evidence suggests that experiencing high on-going stress levels decrease individuals' ability to self-regulate (Fan, Zhang, Yang, Mo, & Liu, 2011; Freedy, Shaw, Jarrell, & Masters, 1992; Soames Job, 2002). Decreased self-regulation has the potential to heighten reactions, and promote coercive cycles of behaviour within families (Patterson, 2002; Sameroff & Mackenzie, 2003). Lack of behavioural control, effective communication, affective responses, lack of problem solving and passive/over-controlling parenting will lead to a decrease in family functioning (Epstein et al., 1983; Patterson, 2002; Sameroff &

Mackenzie, 2003). Miller, Roberts, Zamora, Weber, Burleson, Robles and Tinsley (2012) completed semi-structured interviews parents whose families were evacuated from their homes due to wildfires (n=24) or deadly tornadoes (n=32) within four days of each disaster. The authors assessed parents' self-regulation amongst other factors. Miller et al. (2012) found that children whose parents who modelled healthy self-regulation (emotional) were at decreased risk of developing post-traumatic stress.

To investigate the role of parental psychopathology on adolescent psychopathology Kilic (2011) evaluated 104 children four years after an earthquake. Kilic (2010) found that adolescent stress scores were directly related to paternal stress scores and depression scores to maternal depression. Kilic (2011) also found that social network disruption did not appear to negatively impact children when controlling for parental psychopathology. This may suggest that changes in an adolescents family social system may more greatly impact their parents than themselves. Kilic (2011) concludes that earthquakes may increase the risk of decreases in adolescent adjustment due to interrupting family functioning, causing psychopathology in parents, or disrupting the parents' wider social support system.

Hafstad, Haavind, and Jensen (2012) examined the role of attachment beliefs and parenting behaviours, of 51 highly-impacted Norwegian parents with children ages 6-18 years, on youth's anxious response to the 2004 tsunami in Southeast Asia. Hafstad et al. (2012) found parents had a heightened awareness towards (a) their children's reactions, and (b) their efforts to interpret children's behavioural changes. Additionally, it was found that parents who were severely impacted by the tsunami reported a reduced ability to assess their children's reactions and were therefore unable to respond appropriately to provide optimal care in the aftermath of the 2004 tsunami (Hafstad et al., 2012).

Status of Trauma Responsive Interventions

Current research suggesting that a range of psychological interventions may not have any beneficial influence on post-traumatic stress symptoms after traumatising events have been supported by several meta-analyses researchers (Kramer & Landolt, 2011). Coping skills (Kramer & Landolt, 2011), trauma narrative (Kramer & Landolt, 2011), and single session debriefing (Van Emmerik, Kamphuis, Hulsbosch, & Emmelkamp, 2002; Zehnder, Meuli, & Landolt, 2010) have been investigated. Only cognitive behaviour therapy (CBT) has a base of empirical evidence supporting the effectiveness of reducing psychological distress (Roberts, 2006). Roberts and Everly (2006) sought to establish the efficacy of multiple-session psychological interventions, conducted within the first three months of a traumatic event, in the prevention and treatment of traumatic stress symptoms. Searching nine computerized databases they identified twenty-five studies examining a range of interventions. They found there was no significant difference between any intervention and usual care, other than for cognitive behaviour therapy (CBT). Similar effects have been found for the treatment of psychological effects in adolescents. Shooshtary, Panaghi, and Moghadam (2008) evaluated the effectiveness of cognitive behaviour therapy (CBT) among adolescents (aged 11 and 20 years old) exposed to the 2004 earthquake in Bam, Iran. They evaluated 135 adolescents four months after the earthquake using the Impact of Event Scale-Revised (IES-R). Following Shooshtary et al. (2008) found after completing four weekly two-hour CBT sessions the severity of participants' posttraumatic stress symptoms were significantly decreased.

Recent evidence has suggested social support may be central to recovery from trauma (Dinenberg, McCaslin, Bates, & Cohen, 2014; King, King, Fairbank, Keane, & Adams, 1998). Therefore, it has been recommended that parents and children seek social support to cope with acute stress reactions, whereas the parents additionally were instructed how to support their child in general (Cohen & McKay, 1984; Grant et al., 2013). Interventions that

target healthy social interactions through skills, such as those defined by the McMaster Family Assessment Model, will lead to better adjustment for all family members (Patterson, 2002; Scaramella et al., 2008).

Ministry of Education and Christchurch District Health Board, New Zealand: Select Intervention

In response to the Christchurch earthquakes the Ministry of Education, in a joint mental health action plan with the CDHB, trained counsellors and facilitated Christchurch school counsellors to offer GTPPP to Canterbury residents. Although many counsellors indicated interest in the opportunity to participate in the training, few attended training, and only one counsellor initiated the intervention at her school. The counsellor had complete control over the implementation of the programme and the data collected. After running one programme, the counsellor did not volunteer to run another. At this point the Dovedale Centre- Pukemanu offered to take up the intervention. The Dovedale Centre-Pukemanu is run by the University of Canterbury Child and Family Psychology Programme (University of Canterbury, 2016). The centre provides both assessments and short-term interventions for children and as well as their families who are not currently receiving support. The centre is over-sighted by registered psychologists and operates as a part of the professional training course for advanced post-graduate students in Clinical and Family Psychology. Students are involved with all Centre activities, working alongside senior registered psychologists (University of Canterbury, 2016). The Dovedale Centre- Pukemanu, with Ministry funding, and completed two GTPPP groups. Again, the programme facilitator had control of the programme implementation and collected the research data. To give the reader additional knowledge of the intervention selected by the Ministry a brief outline of GTPPP will be given along with relevant empirical evidence.

The Positive Parenting Programme: A post-disaster intervention for adolescents and their families

Analysis of influences on adolescent wellbeing highlight the significance of parental behaviour in either protecting adolescents or putting them at risk of externalising and internalising disorders (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000). However, despite this evidence many prevention and intervention programs continue to exclude parents, with a primary focus on working with adolescents directly or within the school (Garfat, 2003; Robinson & Pryor, 2006; Ryan, 2003). The growing evidence base is nonetheless promising with parenting programs being shown to enhance inter-personal problem-solving skills and promote adolescent wellbeing (Stallman & Ralph, 2007).

Efficacy of Triple P

The Positive Parenting Program (Triple P) is extensively researched with a large empirical support base (Sanders, Kirby, Tellegen, & Day, 2014). Nowak and Heinrichs (2008) conducted a meta-analysis of 55 research studies on Triple P, finding positive effects of the program across all settings for reducing child behaviour problems, parenting behaviour and parental wellbeing. Triple P is a form of behavioural family intervention based on developmental psychology and social learning principles (Bandura & McClelland, 1977; Patterson, 1982; Taylor & Biglan, 1998). The program aims to prevent severe behavioural, emotional and developmental problems in children by enhancing the knowledge, skills and confidence of parents (Turner & Sanders, 2006). Triple P aims to increase parent's skills in promoting social, emotional and behavioural competence in children and adolescents through reducing parent's use of coercive and punitive methods of discipline, improving communication about parenting and reducing parental stress associated with raising children" and adolescents (Cobham & McDermott, 2014). The program has five levels targeting different age groups and severity of behaviour or emotional problems; with an abundance of

empirical evidence supporting its effectiveness with children aged 0-12 (Sanders, 2008; Sanders et al., 2014). However, currently there is only a little evidence supporting the use of the GTPPP and little research has investigated its use in the aftermath of a natural disaster.

Table 1

Triple P Formats adapted from Triple P Positive Parenting Program for every parent:

Facilitators Manual for Group Teen Triple – Revised Edition by Sanders & Ralph (2005).

LEVEL OF INTERVENTION	TARGET POPULATION	INTERVENTION METHODS
<p><i>1. Universal Teen Triple P.</i></p> <p>Media-based parenting information campaign</p>	<p>All parents interested in information about parenting and promoting their teenagers development</p>	<p>A coordinated information campaign using print and electronic media and other health promotion strategies to promote awareness of parenting issues and normalise participation in parenting programs such as Teen Triple P. May include some contact with professional staff.</p>
<p><i>2. Selected Teen Triple P.</i></p> <p>Information and advice for a specific parent concern.</p>	<p>Parents with specific concerns about their teenager's behaviour or development.</p>	<p>Provision of specific advice on how to solve common developmental issues and minor behaviour problems. May involve face-to-face or telephone contact with a practitioner (about 20 minutes over two sessions) or (60-90 minute seminars).</p>
<p><i>3. Primary Care Teen Triple P</i></p> <p>Narrow focus parenting skills training.</p>	<p>Parents with a specific concern about their teenager's behaviour or development who require consultations or active skills training.</p>	<p>A brief program (about 80 minutes over four sessions) combining advice with rehearsal and self-evaluation as required to teach parents to manage discrete teenage problem behaviour. May involve face-to-face or telephone contact with a practitioner.</p>

<p><i>4. Standard Teen Triple P</i> <i>Group Teen Triple P</i> <i>Self-Directed Teen Triple P</i></p> <p>Broad focus parenting skills training.</p>	<p>Parents of teenagers wanting intensive training in positive parenting skills. Typically targets parents with more severe behaviour problems.</p>	<p>A broad focus program (up to 12 one hour sessions) for parents requiring intensive training in positive parenting skills and generalisation enhancement strategies. Application of parenting skills to a broad range of target behaviours, settings and teenagers. Program variants include individual, group or self-directed (with or without telephone assistance) options.</p>
<p><i>5. Enhanced Triple P</i></p> <p>Behavioural family intervention</p>	<p>Parents of teenagers with concurrent behaviour problems and family dysfunction.</p>	<p>An intensive individually tailored program (up to 11 60-90 minute sessions) for families with teenager problem behaviours and family dysfunction. Program modules include home visits to enhance parenting skills, mood management strategies and stress coping skills, and partner support skills.</p>

Note: Standard Teen Triple P is an intensive individual support intervention for parents with teenagers, which includes ten face-to-face sessions of approximately one hour. This is a separate and unique course to that of GTPPP, which is delivered to a group of parents over 8 weeks including telephone sessions.

Standard Teen Positive Parenting Program (STPPP)

Salari, Ralph, and Sanders (2014) evaluated Standard (level 4) Teen Positive Parenting Program. Salari et al. (2014). They compared 46 families with a teenager who was experiencing detectable behavioural and emotional problems with a waitlist control condition. The authors compared program completers to waitlist controls using analyses of variance. Salari et al. (2014) reported that parents participating in the intervention reported

decreased levels of teen disruptive behaviours and parent adolescent conflict, as well as reduction in the use of ineffective parenting strategies and conflict over child-rearing issues; adding that these changes were maintained at the 3-month follow-up (Salari et al., 2014). Concluding that Standard Teen Triple P is a promising parenting intervention for tackling adolescent externalising problems. This latest study provides hope for parenting programs and provides additional support for the classic assessment tools (SDQ; CBQ; PSA; PPC; RQI; DASS-21 and CSQ) with adolescents.

Group Teen Positive Parenting Program (GTPPP)

Group Teen Positive Parenting Program (GTPPP) is a parenting intervention delivered over eight weekly group sessions for parents of teenagers up to 16 years old who are interested in improving parenting skills (Turner & Sanders, 2006). Additional homework tasks are completed between weekly sessions. It is an intensive training course in positive parenting skills and uses generalization-enhancement strategies; assisting parenting's to apply a broad range of target behaviours, settings and individuals (Ralph & Sanders, 2003b). Relatively few studies have evaluated the effectiveness of GTPPP compared to Triple P for children (Salari et al., 2014). However, despite limitations in working with an adolescent population and their parents, including high attrition rates the limited research available is promising (Ralph & Sanders, 2003b, 2006; Stallman & Ralph, 2007; Wetherall, 2010).

Chu, Bullen, Farruggia, Dittman, and Sanders (2015) examined the efficacy of GTPPP. Seventy-two families with adolescents aged 12-15 years were randomly assigned to either GTPPP or care as usual control condition (n=35, n=37). Parents who received GTPPP reported significantly higher improvements in parenting practices, confidence, quality of family relationships and fewer adolescent problem behaviours after treatment. Adolescents whose parents participated in GTPPP also reported significantly fewer behavioural problems

than the control condition. This study supports the efficacy of GTPPP with adolescents (Chu et al., 2015).

Empirical Evidence of Group Teen Positive Parenting Program

Ralph and Sanders (2003b) first developed and completed a preliminary evaluation of the GTPPP for parents of teenagers making the transition to high school. Ralph and Sanders (2003b) targeted 169 families of 12 to 13 year old adolescents from low-income Queensland (Australia) schools recruited through initial letters from school principals followed by personal phone calls. Of these families, 68 parents expressed interest with only 26 finally completing the program. Before program commencement the participants completed an assessment booklet comprised of the Conflict Behaviour Questionnaire (CBQ), The Parenting Scale for Adolescents (PS-A), the Parenting Beliefs Scale (PBS), the Parent Problem Checklist (PPC), the Depression-Anxiety-Stress Scales (DASS-21), and the Client Satisfaction Questionnaire (CSQ). Participants then completed the program (as described above). Ralph and Sanders (2003) compared mean scores at pre-test against mean scores post-test to evaluate the effectiveness of the program and reported positive outcomes for the targeted areas. Ralph and Sanders (2003) report overall positive outcomes from GTPPP, although they acknowledged further studies were needed to determine if the program resulted in maintained improvement in the target areas (including self-efficacy, self-regulation) and whether these correlated with maintained improvements in parenting. Additionally, the authors emphasise high attrition rates make it difficult to interpret some data, as it is yet unclear whether the program would work with parents who are less interested in making changes within their families. A lack of a control group confounds this question. Despite the remaining questions, findings of Ralph and Sanders (2003) were encouraging and were very quickly followed by another study investigating sustained positive outcomes after GTPPP.

Ralph, Sanders, and Stallman (2004) completed an additional evaluation of GTPPP with parents of 12-to-13 year old children from four Queensland schools in low socioeconomic areas, an area they had identified as high in adolescent delinquent behaviour, using a randomly assigned wait-list design. Parents completed telephone surveys using adapted versions of the Strengths and Difficulties Questionnaire and the Family Background Questionnaire, and adolescents completed the Adolescent Health and Wellbeing Survey. Parents then completed group-parenting programmes where they completed the eight-session GTPPP. Using a series of one-way analyses of variance, the authors reported positive outcomes for most participating parents with significant reductions in a variety of risk factors, and evidence of improvements still being maintained after six months (Ralph & Sanders, 2004). Nevertheless, the evaluation was not without limitations, attrition rate and the method of data analysis might be questioned.

The authors address the issue of attrition rate, with only 47% of participants recruited completing the program. Suggesting "*greater ownership of the program by the participating school is desirable in order to maximise parent engagement, both with the parenting program and with the school more broadly*" (Ralph & Sanders, 2004, p. 6). Therefore, removing in part both some control and responsibility of the program from researchers and placing this in the hands of skilled *Triple P* trained counsellors within schools may be advantageous to the effectiveness of the programme.

To answer this Stallman and Ralph (2007) examined the efficacy of a self-directed parenting intervention, GTPPP, for 51 parents of early adolescents (aged 12-14 years), who reported experiencing difficulties with their adolescent's behaviour. Stallman and Ralph (2007) utilised two levels of intensity within a self-directed intervention (self-directed alone and self-directed plus brief therapist telephone consultations) for parents of 11 to 14 year old children in Queensland. Utilising very similar assessments to that used by Ralph and Sanders

(2003), (SDQ; PSA; DASS-21; CBQ-A and the CSQ) they found using multiple analyses of variance, at post intervention, parents in the enhanced condition reported significantly fewer adolescent behavioural problems and used fewer over-reactive parenting strategies than parents in either the standard or waitlist conditions. Additionally the authors report these improvements were maintained at three-month follow-up. Stallman and Ralph (2007) concluded that a self-directed behavioural family intervention with minimal therapist contact might be an effective early intervention for adolescent problems. The authors add that there were positive implications for providing minimally sufficient interventions for parents using a multilevel approach to intervention as well as for making interventions more accessible for families (Stallman & Ralph, 2007). The results of Stallman and Ralph (2007) suggest increasing parental responsibility for the results of the program may increase attrition rates. Despite positive outcomes and high attrition rate (80%), this form of *Triple P* is unlikely to be suitable for those who have experienced the Christchurch earthquake sequences. It would be reasonable to expect that parents who have or are experiencing ongoing stress as a result of the earthquake may not have the mental or material resources to effectively manage a self-directed program.

Rationale

If Group Teen Triple P has success in improving family functioning for those who have volunteered for the programme, it may provide a useful intervention to promote post-trauma recovery in New Zealand. In combination with Burley (2015) and Sutherland (*under review*.) this study contributes to an exploration of the efficacy of GTPPP with Christchurch families following the Canterbury earthquake sequences. The present study will provide a quantitative analysis of the efficacy of GTPPP in reducing improving family functioning along with parental and adolescent adjustment. If this programme is successful it may inform social policy and future trauma recovery intervention. Whether or not this programme can promote

positive changes in family functioning and parent/child adjustment it will inform clinical practice.

Data

Data analysis and reporting of results of psychological interventions is regularly completed using analyses of variance or similar analyses of group mean data. One-way analysis of variance compared the means of sample populations against a null hypothesis (Crawford, Garthwaite, Howell, & Gray, 2004). Use of group mean data obscures the uniqueness of each individual participant. \Additionally, it does not easily allow itself to making clinical decisions based on patterns of change relative to definitions of reliable change and clinical significance (Jacobson & Truax, 1991). Single case research, with its emphasis on analysis at the individual participant level, and in that it does not average over participants still provides quantitative results (Blampied, 2014).

Research Aims

The present study investigated the efficacy of GTPPP in improving family functioning. The study extends the limited research surrounding the use of parenting practices to promote trauma-recovery. The current study aimed to evaluate at least one, ideally three or more groups, pre and post intervention to evaluate the effectiveness of GTPPP in post-earthquake, Canterbury, New Zealand.

Research Questions

1. Does GTPPP enhance parenting competence for parents self-identified as experiencing post-natural disaster stress/distress?
2. Does participation in GTPPP enhance parents' psychological wellbeing?
3. Does participation in GTPPP by parents decrease parent-teen conflict?
4. Does participation in GTPPP change adolescent adjustment?

Chapter 2

Method

The present study arose (as described above) through the Ministry of Education (MOE) identifying a need for adolescent intervention in Christchurch following the Christchurch earthquakes. In response to this perceived need the MOE offered Teen Triple P Programmes to Christchurch school counsellors. The MOE offered University of Canterbury thesis students an opportunity to conduct research related to the implementation of GTPPP in Christchurch. Three thesis students took up these opportunities (see Burley, 2015 and Sutherland, *under review*). The present study was undertaken as the core investigation of the three and was intended to establish quantitatively if GTPPP did improve parenting practices and confidence in the post-earthquake environment, the impact of the earthquake on the families having been assessed at entry to the program. .

Ethical Approval

Ethical approval for this research was received through the University of Canterbury Human Ethics Committee (Appendix F). Informed consent from the families was first obtained from the parents after delivery of information and consent forms. Parents were met in person where so requested so that any questions parents had could be answered prior to giving of consent. Adolescents were able to consent to taking part in the research only after parents had given their consent for them to do so. Individual consent for each adolescent was acquired. Information and consent forms for parents and adolescents can be found in appendixes B-E.

The participating families participation in the offered programs was in no way influenced by their consenting to partake in the research study and this was clearly explained to participants both verbally and in information forms. All participants were able to withdraw

from the research study at any time without consequence. The identity of each participant was kept confidential through the allocation of numbers to each participant.

Project personnel

There were two sets of personnel involved in this project. The first set of personnel was made up of Group Facilitators from the Dovedale Centre whom conducted the GTPPP. The facilitators included a registered clinical psychologist, and two Child and Family Psychology post-graduate students. The second set of personnel included those charged with researching the effectiveness of the parent-training programme. At the invitation of the Ministry of Education, research personnel included postgraduate students of the University of Canterbury under the supervision of University academic staff. The students also served as assistants to the Group Facilitators during the program, including providing nibbles for attendees. In the case of the present study the student researcher held a Bachelor degree in Psychology from the University of Canterbury, and concurrently with undertaking research for her Master of Science thesis. Her supervisors were Associate Professor Karyn France, Director of the Child & Family Psychology programme at the University of Canterbury, and Professor Neville Blampied of the Department of Psychology. Both supervisors are Registered Psychologists under New Zealand law and both have conducted research into Triple-P parent training programmes previously.

GTPPP Participant Recruitment

Recruitment occurred in a two-stage process. First, parents were recruited to participate in Group Teen Triple-P parent training programmes offered at various locations about Christchurch, including various secondary schools and the Pukemanu-Dovedale Clinic at the University of Canterbury. Second, from among those parents who expressed interest in attending the parent training, parents were recruited to participate in one of three research

projects concurrently being undertaken by University of Canterbury students, under supervision of University of Canterbury staff. The present study is one of the three projects.

At the first step, the training programme was advertised through two main channels, firstly a letterbox leaflet drop throughout suburbs of Christchurch and secondly, advertisements in high school newsletters. The Triple P research assistants completed the letterbox leaflet drop before the school holidays of April 2014; a total of 500 were delivered in the Christchurch urban suburbs of Papanui, Bishopdale, St Albans, and Bryndwr. The GTPPP facilitator and research assistants also emailed school principals and/or Chairs of the School Board of Trustees of selected secondary schools in Christchurch to see if they wanted to advertise the GTPPP programme at their school. Attached to this email were flyers outlining information relating to the programme. Research assistants followed-up the email with telephone contact to answer any questions the recipients may have had. If the Board and school principal were in agreement, the school distributed these flyers to parents.

At the second step interested parents contacted the GTPPP facilitator either by phone or e-mail and were provided with more information relating to what the programme was about and the available dates and times. Parents were then asked if they would be interested in hearing more about the three separate research projects that were being run alongside the GTPPP. Parents who volunteered to be contacted by research students were provided a letter explaining more about the projects from the GTPPP facilitator and/or research assistants. Names and contact details were then passed on to the group facilitators. Group facilitators then contacted parents via telephone to answer any questions about their research component and organise the delivery of written information and consent forms, along with pre-measure questionnaires. Information and consent forms were then collected from parents, organised through phone or email correspondence. A total of 27 parents expressed interest in learning

more about the projects and were contacted via telephone; of these a total of 22 participated initially in the current study.

Training Locales and Participant Retention

Training Locale 1: Four parents of the 22 participated in a program provided at a secondary school, however, due to an administrative oversight by the Group Facilitators, post-assessment data was not collected from these parents and therefore they had to be excluded from current research.

Training Locale 2: The second and third groups from which parents were recruited for the research were provided by the Pukemanu – Dovedale Centre at the University of Canterbury. Eighteen parents were enrolled in the research and 13 completed in that they provided pre- and post-test measures. Six of them also provided follow-up measures. Of their target children, 11 completed pre-assessment measures, 10 provided post-measures, and 6 follow-up measures.

Participants

Participants were 18 parents who completed the GTPPP that was available to parents throughout Christchurch and volunteered to participate in the current study. Inclusion criteria for participation were only that those participants had an adolescent child aged 12-17 years. If participants had more than one child in this age range parents were asked to select the child that they recently had been worrying about most (target child) (Zemp, Milek, Cummings, Cina, & Bodenmann, 2015).

Table 2

Dovedale Group One Participant Retention

Participant	Relationship	Marital Status	Childs Age	Childs Gender	Session number								Total	Pre	Post	F/U
					1	2	3	4	5	6	7	8				
1	Mother	Divorced	11	F	✓	✓	✓	✓	✓	✓	✓	✓	8	✓	✓	
2					✓	✓	✓	✓	✓	✓	✓	-	7			
3					✓	✓	✓	✓	✓	✓	✓	-	7			
4	Mother	Married	15	F	✓	✓	✓	✓	✓	✓	✓	✓	8	✓	✓	✓
5					✓	✓	✓	✓	✓	✓	✓	-	7			
6	Mother	Married	14	M	✓	✓	✓	✓	✓	✓	✓	✓	8	✓	✓	✓
7	Father	Married	14	F	✓	✓	✓	✓	✓	✓	✓	✓	8	✓	✓	✓
8					✓	✓	✓	✓	✓	✓	✓	✓	8			
9	Mother	Married	13	F	✓	✓	✓	✓	✓	✓	✓	✓	8	✓	✓	✓
10	Mother	Married	12	F	✓	✓	✓	✓	✓	✓	-	✓	7	✓	✓	
11	Mother	Married	14	F	-	✓	✓	✓	✓	✓	-	✓	7	✓	-	✓
12	Mother	Married	16	F	✓	✓	✓	✓	✓	✓	✓	✓	8	✓	✓	
13	Mother	Defacto	15	F	✓	✓	✓	✓	✓	✓	-	-	6	✓	-	✓
14					✓	✓	✓	-	-	-	-	-	3			
15					✓	-							1			
16	Mother	Married	-	-	✓	-	✓	✓	✓	✓	✓	-	6	✓	✓	
17					✓	✓	✓	✓	✓	✓	-	✓	7			
18	Father	Married	14	M	✓	✓	✓	✓	✓	✓	✓	✓	8	✓	✓	✓

F=Female, M=Male, F/U = Follow Up

Note: GTPPP group commencement date 20th of August, 2014.

Table 3

Dovedale Centre Group Two Participant Retention

Participant					Session number								Total	Pre	Post	F/U
					1	2	3	4	5	6	7	8				
1					✓	✓	✓	✓	✓	✓	✓		8			
2	Father	Married	16	M	✓	✓	✓	✓	-				4	✓	-	-
3	Mother	Married	13	M	✓	✓	✓	✓	✓	✓	✓	✓	8	✓	✓	-
4					✓	-							1			
5	Mother	Married	12	M	✓	✓	-	✓					3	✓	-	
6					✓	✓	✓	✓	✓	✓	-		6			
7	Father	Married	12	M	✓	✓	-	✓	✓	✓			5	✓	-	-
8	Mother	Married	14	F	✓	✓		✓	✓	-	-	✓	5	✓	✓	-
9					✓	-							1			
10	Mother	Divorced	13	M	✓	✓	✓	-					3	✓	✓	-
11	Mother	Married	14	F	-	✓	✓	✓	✓	✓	✓	✓	7	✓	✓	-

Note: GTPPP group commencement date 24th of September, 2014

As outlined in Table 2, four participants were fathers and fourteen were mothers. All parents, except three, were currently married. The adolescents were aged 11 to 16, with a mean age of 13.7 years, five boys and ten girls. Eleven people enrolled in the GTPPP commencement data 24th of September 2014.

Table 3 presents attendance data of the second Dovedale group. Participants 2, 3, 5, 7, 8, 10 and 11 agreed to participate in the current research.

Setting

The GTPPP programme face-to-face sessions were conducted either at the school of delivery or at the Pukemanu – Dovedale Centre. Participants completed exercises and homework tasks at home. The research measures used in the current study were completed in a place of the participants' choice, unobserved.

Materials

The materials used in the GTPPP, as implemented by the GTPPP facilitator were:

- GTPPP Group Workbook
- Triple P DVD *Every parents' guide to Teenagers* (Sanders et al., 2011).
- *Powerpoint Presentation for Group Teen Triple P* (The University of Queensland and Health Department of Western Australia, 2007).

The materials used in this study were:

- Flyer (Appendix A)
- Information sheet (Appendix B,C)
- Consent form (Appendix D,E)
- GTPPP self-report measures (See measures below)
- Earthquake related self-report measures (See measures below)

Measures

Data was gathered using self-report questionnaires. All participants had consented prior to the self-report questionnaires being provided to the researcher by the programme leader for evaluation.

Measures used only prior to the intervention

Standard Triple P Measures

The *Family Background Questionnaire* (FBQ) was used to capture socio-demographic information including name, age, gender, marital status, employment and educational background (Garton, Zubrick, & Silburn, 1995). This measure was included with the standard range of Triple P measures.

Additional Study Measures

Children's Revised Impact of Event Scale was used to assess adolescents post traumatic stress symptoms. It is a 13-item self-report measure of intrusion (four items), avoidance (four items), and arousal (five items) symptoms, which was adapted to children and adolescents. Participants report how often each thought, feeling, or behaviour has occurred during the past month (0=not at all, 1=rarely, 3=sometimes, 5=often). The total score for all items, with higher scores denoting increased symptom severity, used an overall index of trauma. The scale has an internal reliability Cronbach's alpha of 0.87 and a strong correlation between the total CPTS-RI, and CRIES scores ($r=0.79$) provides evidence for convergent validity of the scale (Giannopoulou et al., 2006).

The *Impact of Event Scale- Revised* was used to capture parental responses to the trauma of the 2011 earthquake sequences that they had experienced over the past seven days (Weiss, 2007). It has 22 questions including intrusion, avoidance and hyper arousal subscales. The IES-R yields a total score (ranging from 0 to 88), individual scores can range from 0 through 4 on each item. The scale discriminates between traumatised and non-traumatised groups. Responses can be interpreted as an IES-R score between 1-11 showing

little or no symptoms of post-traumatic stress; IES-R score between 12-32 showing several symptoms of post-traumatic stress; IES-R score equal or greater than 33 very likely to have post-traumatic stress disorder (Weiss, 2007).

Standard Triple P Measures used for Pre, Post and Follow-up Intervention Measures

The *Strengths and Difficulties Questionnaire- extended Version (SDQ)* was used to measure parental perceptions of pro-social and difficult behaviours in their adolescents (Goodman, 1999; Goodman, Ford, Simmons, Gatward, & Meltzer, 2000). The SDQ has been validated for use as a behavioural screening questionnaire for children aged from three to 16 years. The scale consists of 25 statements with each divided into five subscales: pro-social, hyperactivity, peer problems, emotional symptoms and conduct problems, measuring the frequency of positive and negative behaviours (Salari et al., 2014). Each item is rated on a 3-point scale from 0 (not true) to 2 (certainly true). The extended version assesses whether the respondent thinks the child has a problem, and if so, the perceived impact on the child and burden on the family. The SDQ has good internal consistency, test-retest reliability and discriminant validity (Goodman, 1999; Goodman et al., 2000).

The *Conflict Behaviour Questionnaire (CBQ-20)* was used to measure perceived communication and conflict in the parent-adolescent relationship (Robin & Foster, 2003). Parents and adolescents are asked to indicate whether each statement is true or false. The CBQ is a brief screening measure found to successfully discriminate between distressed and non-distressed families (Salari et al., 2014). The 20-item CBQ has a correlation of 0.96 with the 75-item scale which has adequate validity and reliability (Robin & Foster, 2003). Normative data for distressed and non-distressed mother on adolescent, father on adolescent, adolescent on mother and adolescent on father are 12.4 vs. 2.4, 10.5 vs. 3.2, 8.4 vs. 2.0 and 7.6 vs. 1.6 respectively (Robin & Foster, 2003).

The *Parenting Scale-Adolescent version (PSA)* is an adaptation of the Parenting Scale and preserves 13 items from the original 30 (Arnold, O'Leary, Wolff, & Acker, 1993; Irvine, Biglan, Smolkowski, Metzler, & Ary, 1999). The scale was used to measure parental scores on two dysfunctional discipline styles in parents Laxness and over-reactivity. For each item, parents are asked to rate how they would react to a given behaviour problem by choosing between an effective or ineffective strategy on a 7-point scale. The revised scale has adequate internal consistency for the Total score ($\alpha=.84$), Laxness ($\alpha=.82$), and over-reactivity ($\alpha=.83$) scales, as well as good test-retest reliability ($r=.86, .82$, and $.82$ respectively) (Irvine et al., 1999). The scale has been found to discriminate between parents of non-clinic and clinic children with clinical group means of laxness= 3.1 (0, 9), over-reactivity= 3.6 (1.1).

The *Issues Checklist* by Robin (1989) was used to discriminate between distressed families and non-distressed families and as a discussion tool for parents to identify what topics are issues for them personally (Robin & Foster, 2003). It is a 44 item questionnaire. It has been recommended that for rapid screening purposes, primary care health professionals should conduct further assessment when parents circle 15 or more items "yes" and/or have a mean intensity rating of 2 or higher.

The *Depression Anxiety Stress Scales-21 (DASS-21)* was used to assess parents' and adolescents' adjustment and assesses symptoms of depression, anxiety, and stress in adults using a 21-items extracted from the longer 42 item DASS-42 (Henry & Crawford, 2005; Lovibond & Lovibond, 1995b). Each item is rated on a 4-point scale from 0 (*did not apply to me*) to 3 (*applied to me very much, or most of the time*). The DASS-21 has high internal consistency for each of the depression, anxiety, and stress scales ($\alpha=.91, .84$ and $.90$, respectively) and good discriminant and concurrent validity (Henry & Crawford, 2005; Lovibond & Lovibond, 1995a).

To calculate the total DASS-21 scores in comparison to the clinical cutoff scores reported by Lovibond and Lovibond (1995) DASS-21 scores are doubled (Henry & Crawford, 2005). Therefore Modified Brinley plots presented herein will use DASS-21 doubled scores. Quantitative data analysis will use unaltered raw scores, so that the DASS-21 total score can also be reliably interpreted (Henry & Crawford, 2005).

Table 4

Clinical Cutoff Scores adapted from Lovibond and Lovibond (1995).

	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

Note: Clinical scores include moderate, severe and extremely severe.

Standard Triple P Measures used only after the intervention

The *Client Satisfaction Questionnaire (CSQ)* was used to assess parental perceptions on the quality of service provided; how well the program met the parents' needs, increased the parents' skills, and decreased the child's problem behaviours; and whether the parent would recommend the program to others. The scale has high internal consistency ($\alpha=.96$), an item-total correlation of .66 and inter-item correlations of 0.30 to .87 (Eisenstadt, Eyberg, McNeil, Newcomb, & Funderburk, 1993; Sanders, Markie-Dadds, Tully, & Bor, 2000). This measure is usually conducted shortly after the intervention and included in the post-intervention questionnaires; however, due to facilitator preference this measure was instead conducted at follow-up.

Procedure

Initial assessment procedures: Participants were delivered the pre-intervention measures by the research assistants in their own home prior to the intervention or were able to collect these at the first GTPPP session and return this on the second session for scoring by the GTPPP facilitator. Pre-intervention measures were completed unobserved. The measures for use by the target adolescent were provided along with a sealable envelope so that adolescents' contributions were kept confidential and separate from parental responses.

Group training programme: The parent participants engaged in an 8-week GTPPP course facilitated by an accredited Triple P facilitator. The GTPPP itself firstly involved four sessions of ~ 120 minutes in length and focused on positive parenting, encouraging appropriate behaviour, managing problem behaviour and dealing with risky behaviour respectively. The next three sessions (sessions five to seven) involved 15-30 minute one-on-one phone calls with their counsellor on implementing family routines. Lastly, the parent participants completed a 120-minute session, which reviews the program and brings the program to a close.

Parents who were enrolled in the GTPPP were able to purchase GTPPP workbooks *Teen Triple P Group Workbook* (Ralph et al., 2004). This workbook provided background information, homework activities, learning tasks as well as a platform for parents to make notes during the sessions. The following is a summary of the main aims of each session.

Table 5

Group Teen Triple P Sessions Table adapted from Teen Triple P Group Workbook (Ralph & Sanders, 2004).

Session	Objectives
<p>Session1: Positive Parenting (Face to Face)</p> <p>This session provides parents with an introduction to what is positive parenting, factors that influence teenagers' behaviour, and how to set goals for change. Parents</p>	<p>Describe positive parenting and what it involves</p> <p>Identify factors that play a role in your teenager's behaviour patterns</p> <p>Set goals for change in your teenager's and your own behaviour</p>

submit a completed assessment booklet at the beginning of this session.	Start monitoring one of your teenager's behaviours
<p>Session 2: Encouraging Appropriate Behaviour (Face to Face)</p> <p>During this session, the practitioner discusses how to develop positive relationships with teenagers, increase desirable behaviour, teach new skills and behaviours, use behaviour contracts, and hold family meetings.</p>	<p>Use the strategies for developing a positive relationship with your teenager</p> <p>Use the strategies for encouraging describable behaviour</p> <p>Use the strategies for teaching teenager new skills or behaviours</p> <p>Choose two positive parenting strategies to practice and monitor for 7 days</p> <p>Set up a behaviour contract with appropriate regards for your teenager</p>
<p>Session 3: Managing problem behaviour (Face to Face)</p> <p>Managing problem behaviour. In this session, parents learn how to develop family rules, deal with non-cooperation, acknowledge emotions, and use behaviour contracts. They have an opportunity to rehearse these routines to promote emotional self-regulation in the session.</p>	<p>Set appropriate family rules and discuss them with your family</p> <p>Use directed discussion to deal with mild problem behaviour</p> <p>Make clear, calm requests</p> <p>Back up your requests with logical consequences</p>
<p>Session 4: Dealing with Risky Behaviour (Face to Face)</p> <p>This session covers identifying risky situations, routines to deal with risky behaviour, and family survival tips. Parents also prepare for their telephone consultation sessions.</p>	<p>Identify situations that may put your teenager's health or wellbeing at risk</p> <p>Describe the six steps involved in designing a routine to deal with risky behaviour</p> <p>Construct a community contact network to help monitor your teenagers behaviour</p>
<p>Session 5: Implementing parenting routines 1 (Telephone)</p> <p>The practitioner provides feedback from initial assessments that the family completed and then uses a self-regulatory feedback model to assist parents to review their implementation of parenting strategies and risky behaviour plans. From this, parents set goals for the further refinement of their routines, if needed.</p>	<p>Set a clear, specific agenda for future sessions</p> <p>Set goals and tasks independently</p> <p>Plan, use monitor and modify behaviour contracts as required.</p> <p>Plan use and evaluate routines for dealing with risky situations as required.</p> <p>Access information on parenting issues, if needed.</p> <p>Get support from family, other parents and group members when needed.</p>
Session 6: Implementing Parenting Routines 2 (Telephone)	Set a clear specific agenda for future sessions.

As above.	<p>Set goals and tasks independently.</p> <p>Plan, use, monitor and modify behaviour contracts as required.</p> <p>Plan use and evaluate routines for dealing with risky situations as required.</p> <p>Access information on parenting issues, if needed.</p> <p>Get support from family, other parents and groups members when needed.</p> <p>Solve any parenting problems with minimal help from the group leader.</p>
<p>Session 7: Implementing routines 3 (Telephone)</p> <p>As above.</p>	<p>Set a clear, specific agenda for future sessions.</p> <p>Set goals and tasks independently.</p> <p>Plan, use, monitor and modify behaviour contracts as required.</p> <p>Plan use and evaluate routines for dealing with risky situations as required.</p> <p>Access information on parenting issues, if needed.</p> <p>Get support from family, other parents and group members when needed.</p> <p>Solve any parenting problems with minimal help from the group leader.</p>
<p>Session 8: Programme Close (Face to Face)</p> <p>Program close. Parents return for a final group session to review progress and family survival tips, look at ways to maintain changes and problem-solving for the future, and to close the program. If necessary, referral options are discussed.</p>	<p>Design, implement and evaluate (i) appropriate parenting strategies to improve desirable behaviour and manage problem behaviour with your teenager, and (ii) routines to assist your teenager deal with potentially risky situations</p> <p>Use information resources independently.</p> <p>Obtain support from family, friends, and group members, as well as from your parent support network.</p> <p>Solve parenting problems independently.</p>

Post-test measures Each parent completed the Triple P measures in the last session of the GTPPP intervention. Additionally, parents completed a client satisfaction questionnaire to capture their perceptions of the program. Participants had the option of finishing these questionnaires with the facilitator or taking them home to complete and be collected by the

research assistants. After two weeks participants were then contacted through both email and follow-up phone contact to (a) thank them for returning their questionnaires or (b) see if they had received the questionnaires and if they would like any support to complete the questionnaires and a research assistant to collect them. Research assistants collected completed questionnaires, and returned them to the accredited course facilitator to score.

Follow-up Self-Questionnaire Battery

Follow-up questionnaires with pre-paid envelopes were posted to participants three months after the last GTPPP session. After two weeks participants were then contacted through both email and follow-up phone contact to (a) thank participants for returning their questionnaires or (b) see if they had received the questionnaires and if they would like any support to complete the questionnaires and a research assistant to collect them. Research assistants collected completed questionnaires, and returned them to the accredited course facilitator to mark.

Research Design and Data Analysis

The research was conceived as a multiple-baseline across groups design but practical limitations precluded recruitment of participants sufficiently far in advance of participation in training groups to make this design feasible (Cooper, Heron, & Heward, 2007). The study, therefore, became a quasi-experimental pretest-posttest (AB) design with no control phase/group. To promote participant retention, participants were not randomly assigned to intervention groups and were instead accepted on a first-come-first-served basis (Ralph & Sanders, 2004).

With pre-, post- and follow-up data available conventional data analysis would examine mean results at each time point using, for example, a one-way Analysis of Variance. In such an analysis, the samples are assumed to represent some general population. However, they convey very little about what types of individual change may have occurred (Barlow,

Hersen, Barlow, Nock, & Hersen, 2009; Blampied, 2014; Jacobson & Truax, 1991). The current study used modified Brinley plots which allow visual analysis of data for all participants and the display of change directly (Blampied, 2014). These plots also may show group/phase means, variance, confidence intervals, effect sizes, clinical cut-offs, reliable change and percentage of reliable change. A 95% confidence interval has been used during data analysis, displayed in brackets [$\pm X$, $\pm Y$]. Cohens D, indicated by d , has been used in the analysis to indicate effect size in the comparison of pre and post intervention means. Cohens D may be reported as small $d=0.2$, medium $d=0.5$ and large $d=0.8$.

Modified Brinley plots. Modified Brinley plots are a scatterplot in essence. Each individual's data is plotted as a scatter-plot of coordinate points- time1 on X, time 2 on Y. Axes must have same scale and origin. The line at 45° running diagonally from the lower left hand to top right hand corner is the line of no effect – perfect stability means $x=y$. The examples below show (a) no change over time, (b) random error, (c & d) systematic change over time is shown as points above/below the line. Therefore systematic treatment effects are shown as deviations from the diagonal.

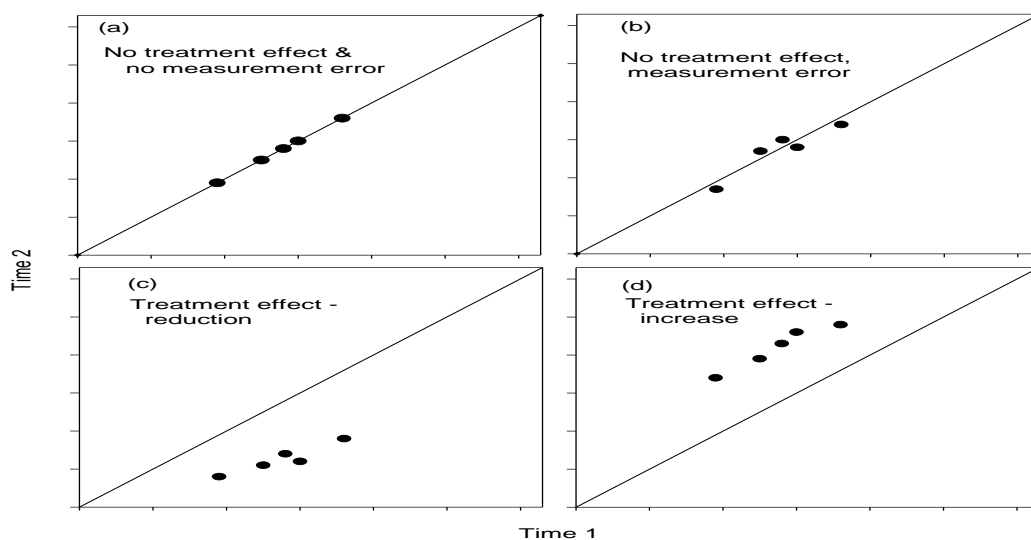


Figure 1. Modified Brinley plot line of no change.

To assist interpreting the graph space vertical and horizontal lines representing clinical cut-offs from prior clinical research can be shown and an arrow on the cut-off line shows direction of clinical change. This allows improvements and deterioration to be displayed and the classification of individual outcomes (Jacobson, Follette, & Revenstorf, 1984).

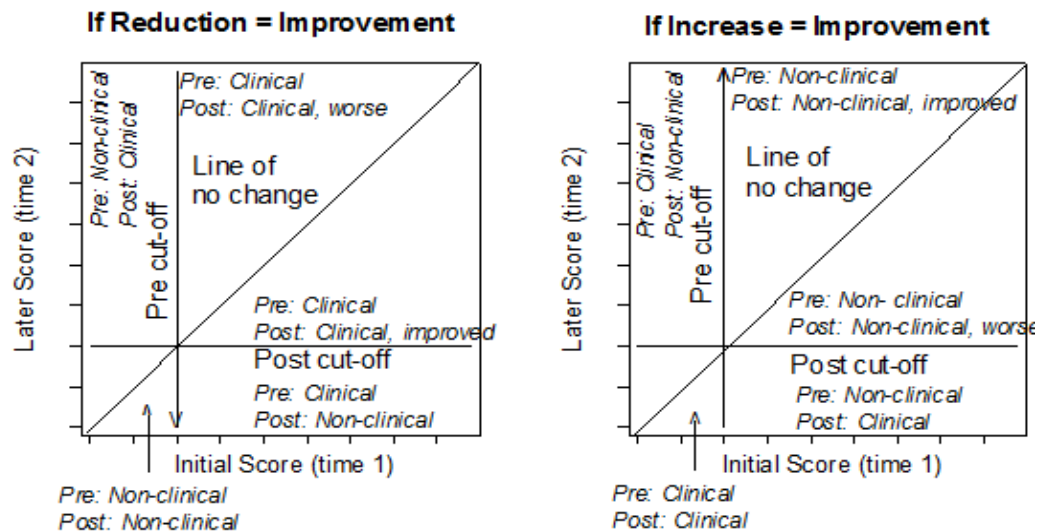


Figure 2. Modified Brinley plot examples.

Jacobson et al. (1984) introduced the use of the Reliable Change Index (RCI) based for any measure on the standard error of measurement (SE_M), via the derivative Standard Error of the Difference (S_{Diff}) of the specific measure. With $p < .05$ set as the criterion the $RCI = S_{Diff} \times 1.96$ - if the an individual's difference score on a measure exceeds the RCI the difference is unlikely ($p < .05$) to be due to measurement error alone as the difference score then lies in the 5% tail of the measurement error distribution. This allows each individual to be classified as showing positive reliable change, RC+, reliable deterioration, RC-, or no reliable change, RC0. Furthermore, the percentage showing positive reliable change (RC+%) is an effect size (ES) indicating the degree of clinically reliable change observed following the intervention (Blampied, 2014). Cohen's d (*within*) ES and the corresponding 95% CI for d , can be used additionally to judge the impact of treatment, were a large ES with high

precision is ideal, as the larger the proportion of participants demonstrating reliable change the more credible a given study is (Blampied, 2014).

Chapter Three

Results

At post-test usable questionnaires were obtained from 15 parents although there were occasional missing data for some measures. As there was there was only one couple that completed both pre- and post-test questionnaires, it was decided to only enter the mothers' scores, as this was the more complete data set of the two. This resulted in fourteen usable pre and post-intervention sets of family data, consisting of twelve mothers and three fathers. Since there were a small number ($n = 4$) of participants who completed the second group program at Dovedale Centre, results for both programs have been combined for this analysis, to enable conclusions about the effectiveness of GTPPP to be made on the basis of more replications ($n = 14$). All participant scores have been included in the analysis of GTPPP participant characteristics. However, only participants who completed both pre and post-intervention measures have been used to evaluate the effectiveness of the GTPPP.

Differentiating Families by Earthquake Impact

To examine the impact of the major Canterbury earthquake on the families participants were divided into two groups according to the parents' IES-R total score, differentiated into low and med/high categories. In addition, due to a large amount of missing data for parental IES-R scores, a third category was included labelled – “no IES-R”.

Table 6

IES-R Categories

		Participants at uptake	Participants who completed post
	IES-R total score	Frequency	Frequency
No IES-R	-	10	4
Low	0-8.5	7	5
Med	8.6-19	5	4
High	19.1-37	2	1

Table 6 (IES-Categories) shows that those participants who did complete the IES-R (60%) were more likely to drop out from the research as well as those who were highly impacted (50%) compared to those who self-reported as having low (29%) or medium (20%) levels of impact.

Impact of Events Scale Frequency Distribution

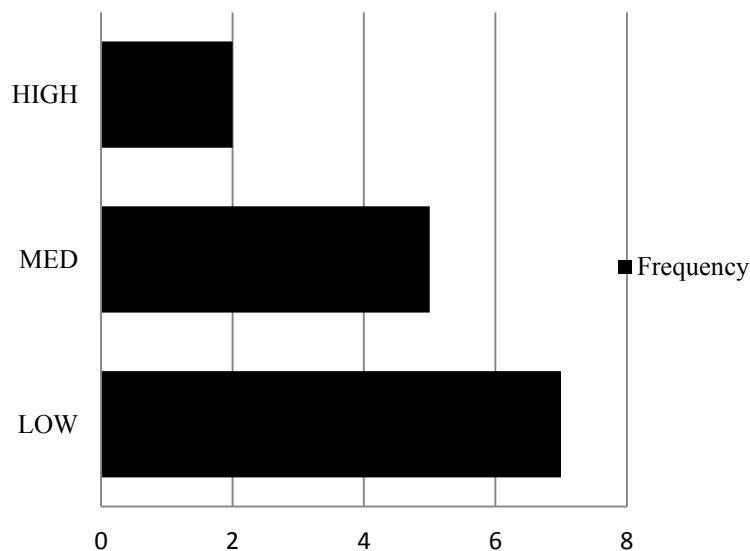


Figure 3. IES-R Frequency Graph

Change in IES scores over time: Prior to the intervention ten participants elected not to complete this measure. Therefore change for these participants could not be determined. Of the remaining seven, five and two participants respectively reported scores categorised as low, medium and highly impacted. After the intervention four of the participants did not complete the IES-R. Ten participants completed the IES-R; five, four and one participant score were subsequently categorised as low, medium and high respectively.

Table 7

Parental Scores on the Impact of Event Scale- Revised (IES-R) and Adolescent Scores on the Children's-Revised Impact of Event Scale (CRIES) (pre-intervention)

	P	A	P	A	P	A	P	A
Scale	<i>n</i>		<i>M(SD)</i>		<i>min.</i>		<i>max.</i>	
INTRU	13	8	4.46 (5.08)	1.63 (1.41)	0	0	14	4
AVOID	13	9	3.62 (4.46)	1.78 (2.99)	0	0	12	9
HYPER	13	9	3.41 (4.23)	5.33 (3.54)	0	0	14.67	11
TOTAL	13	9	11.23 (11.43)	8.78 (4.79)	0	0	37	15

Note: INTRU = intrusion; AVOID= avoidance; HYPER= Hyper Arousal; P= Parental score on IES-R (pre), A= Adolescent score on the CRIES (pre), n= number of participants, *M* = mean; *SD*= standard deviation.

Table 7 shows parents had higher self-reported IES-R scores than adolescent CRIES scores, in all scales excluding hyper arousal.

Participant Characteristics

Table 8

Parental and Adolescent Scores on the DASS-21 (pre-intervention)

	P	A	P	A	P	A	P	A
Scale	<i>n</i>		<i>M (SD)</i>		<i>min.</i>		<i>max.</i>	
Depression	24	9	6.75 (7.5)	1.56 (1.88)	0	0	24	5
Anxiety	24	9	2.08 (3.2)	1.67 (1.66)	0	0	12	4
Stress	24	9	12.17 (8.9)	3.56 (2.83)	0	0	32	7
Overall	24	9	21 (16.2)	6.78 (5.91)	0	0	56	16

Note: P= Parental score on DASS-21 (pre), A= Adolescent score on the DASS-21 (pre), n= number of participants, *M* = mean; *SD*= standard deviation.

Table 8 shows the self-reported scores on the DASS-21 were consistently lower for adolescents than parents.

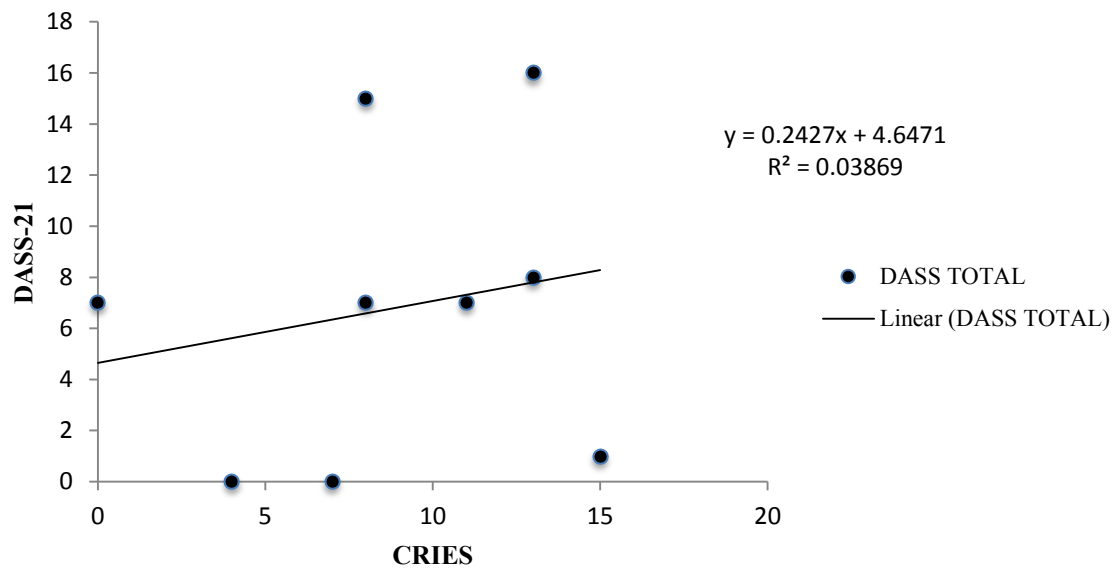


Figure 4. Adolescent CRIES-13 v.s. Adolescent DASS-21 (pre-intervention)

Figure four shows the parental and adolescent DASS-21 scores prior to the intervention did not correlate ($r = .07$; $R^2=0.005$).

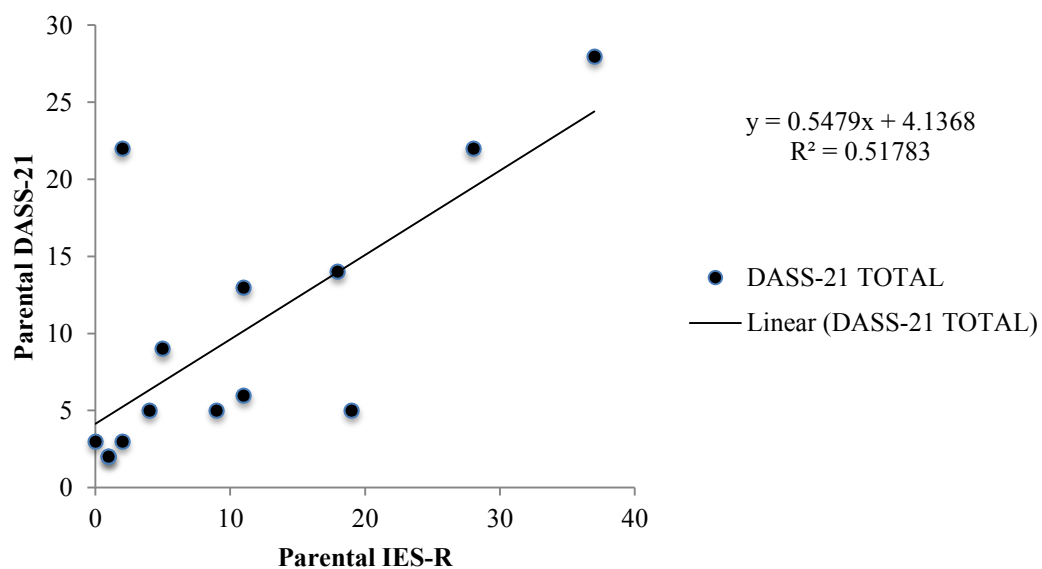


Figure 5. A comparison of parental DASS-21 scores on parental IES-R Scores.

Figure five shows that parents self-reported impact of event scale score (IES-R) was moderately correlated ($r=.72$) with parental self-reported depression, anxiety and stress scores (DASS-21) accounting for 52% of the variation in scores.

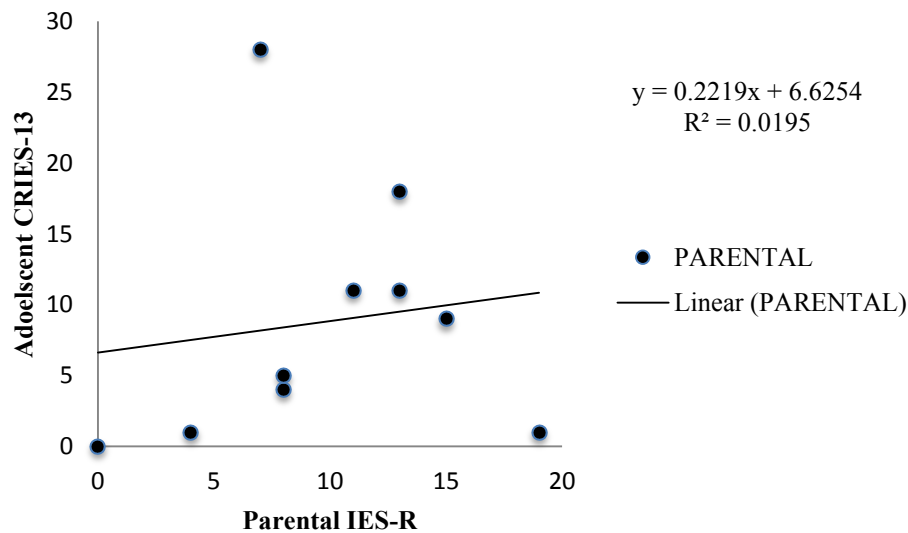


Figure 6. Comparison of the Impact of the Canterbury Earthquake on Adolescents and Parents.

Figure six shows that the relationship of parents self-reported impact of event scale score (IES-R) with adolescent CRIES was of small effect and accounted for 7% of the variation in scores ($r=.14$; $R^2=.07$).

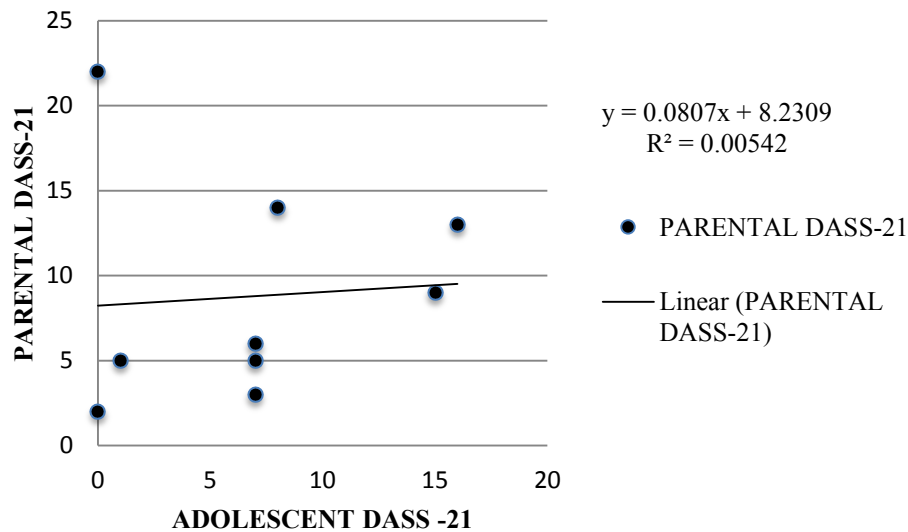


Figure 7. A Comparison of Adolescent and Parental Depression, Anxiety and Stress Symptoms.

Figure seven shows that the relationship of parents self-reported impact of event scale score (IES-R) with adolescent CRIES was of small effect and accounted for 7% of the variation in scores ($r=.14$; $R^2=.07$).

Visual Analysis

In a modified Brinley plot analysis, the inference that a treatment has caused a positive change in a dependent variable requires that individual's data points move downward and away from the diagonal line (if treatment effect is expected to result in a decrease) or upward and away from the diagonal line (if treatment effect is to result in an increase) (Gordon, Rucklidge, Blampied, & Johnstone, 2015). Secondly, to demonstrate this change is significant the data should lie below (or above) a dashed line indicating the lower bound of the RCI. For the conclusion that clinically significant change has occurred for an individual their data point should lie both beyond the RCI line and below/above the line showing the clinical cut off.

Research Aim One: Parenting Competence.

Research aim one was to find out if GTPPP enhances parenting competence for parents after the Canterbury earthquakes. Table 9 reports the group-level summary statistics.

Table 9.

Group-level summary statistics for the PSA

	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Scale	<i>n</i>		<i>M (SD)</i>		<i>min.</i>		<i>max.</i>	
LX	14	14	2.89 (0.99)	2.06 (1.05)	1.33	1.00	4.50	4.50
OR	14	14	3.74 (0.83)	2.38 (0.96)	2.33	1.17	5.00	4.00
NF Sum	14	13	2.57 (1.40)	1.69 (0.95)	1.00	1.00	5.00	4.00
TSS	14	14	3.25 (0.65)	2.18 (0.92)	1.85	1.15	4.23	4.23

Note: LX= laxness; OR= over-reactivity; NF Sum = non-factor sum; TSS= total sum of scores; *n*= number of participants, *M* = mean; *SD*= standard deviation.

As can be seen in figure 8, prior to the intervention, four (29%), seven (50%) and seven participants (50%) respectively were in the clinical or borderline range of functioning (cut-off) for laxness, over-reactivity and total parenting competence but three (21%), five (36%) and five (36%) participants moved from clinical to non-clinical levels of following of laxness, over-reactivity, and competence respectively after the intervention. Immediately following treatment the majority of parents (13) improved to exhibit more functional parenting on all discipline styles. Note that one participant showed reliable deterioration in parenting laxness shortly after the intervention. Overall parenting scores improved when assessed by Cohen's *d* standardized mean difference Effect Size (ES), with parenting total score $d = -1.48 [-2.24, -.65]$, a large effect by Cohen's criteria and clearly significantly different from zero (as the CI does not include zero). Overall, the results suggested that GTPPP enhances parenting competence for parents after the Canterbury earthquakes.

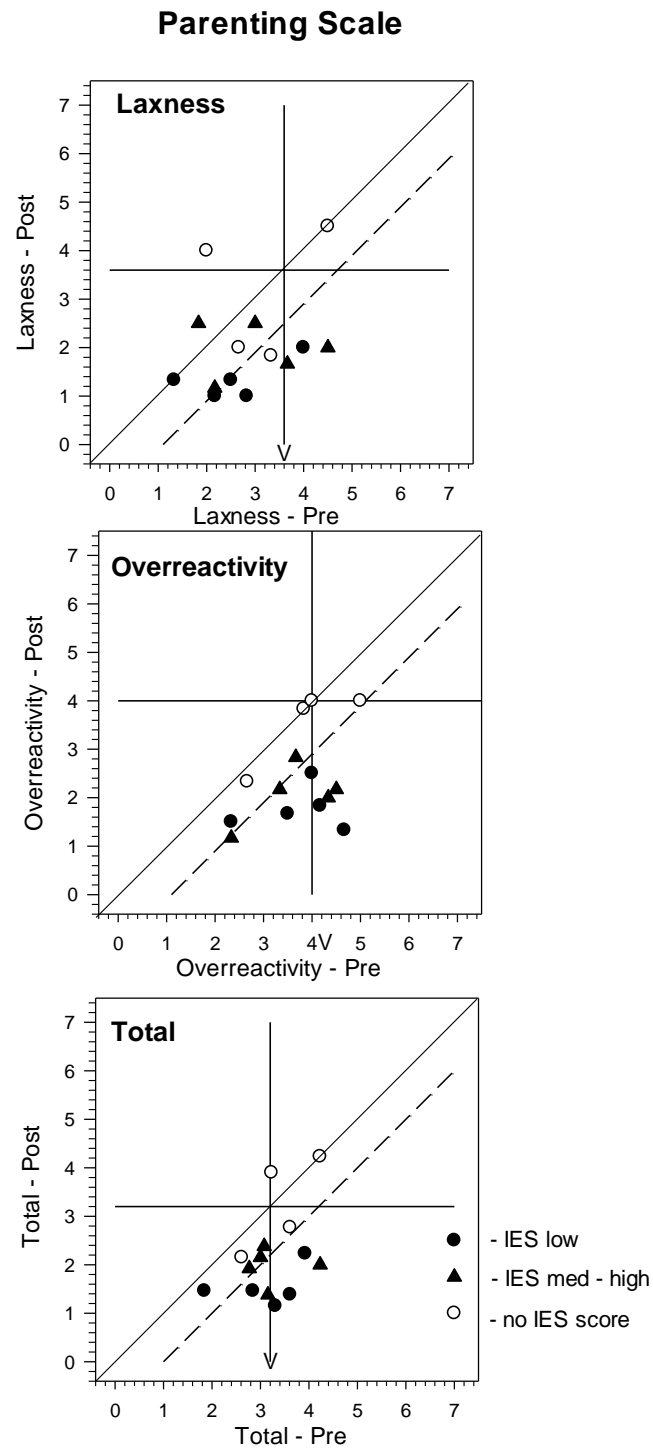


Figure 8. Parenting Scale

Figure 8: Modified Brinley plots showing subscale scores for the Parenting Scale. Solid diagonal line represents the line of no effect; dashed diagonal line = lower bound of the Reliable Change Index. IES = Impact of Event Scale. Higher/lower scores indicate greater difficulty for all subscales behaviour.

Table 10.

Summary Statistics for Parenting Scale scores categorised by IES

		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
IES-R	Scale	<i>n</i>		<i>M (SD)</i>		CI		<i>min.</i>		<i>max.</i>	
No	LX	4	4	3.13 (1.07)	3.08 (1.36)	1.04	1.34	2.00	1.83	4.50	4.50
	OR	4	4	3.88 (0.96)	3.54 (0.81)	0.94	0.79	2.67	2.33	5.00	4.00
	NF Sum	4	3	3.00 (1.15)	2.67 (1.15)	1.13	1.31	2.00	2.00	4.00	4.00
	TSS	4	4	3.42 (0.68)	3.26 (0.97)	0.66	0.95	2.62	2.15	4.23	4.23
Low	LX	5	5	2.57 (0.98)	1.33(0.41)	0.86	0.36	1.33	1.00	4.00	2.00
	OR	5	5	3.73 (0.89)	1.77 (0.45)	0.78	0.40	2.33	1.33	4.67	2.50
	NF Sum	5	5	2.60 (1.52)	1.40 (0.55)	1.33	0.48	1.00	1.00	5.00	2.00
	TSS	5	5	3.11 (0.81)	1.54 (0.41)	0.71	0.36	1.85	1.15	3.92	2.23
Med/ High	LX	5	5	3.03 (1.09)	1.97 (0.57)	0.95	0.50	1.83	1.17	4.50	2.50
	OR	5	5	3.63 (0.87)	2.07 (0.60)	0.76	0.52	2.33	1.17	4.50	2.83
	NF Sum	5	5	2.20 (1.64)	1.40 (0.89)	1.44	0.78	1.00	1.00	5.00	3.00
	TSS	5	5	3.25 (0.57)	1.97 (0.37)	0.50	0.33	2.77	1.38	4.23	2.38

Note: LX= laxness; OR= over-reactivity; NF Sum = non-factor sum; TSS= total sum of scores; *n*= number of participants, CI = confidence interval; *M* = mean; *SD*= standard deviation.

Table 10 shows mean parenting scale scores separated into by IES-R categories. Those who scored low on the IES-R, med/high and did not complete the IES-R scored lowest, med/high, and highest respectively on measures of LAXNESS, OVER-REACTIVITY and TOTAL scores.

To explore the relationship between laxness and over-reactivity scatterplots were constructed with linear regression lines fitted (see Fig. 9 and 10). Figure 9 and 10 show that prior to the intervention, scores on over-reactivity accounted for less than 1% of the variance in laxness, but after the intervention the variance accounted for increased to 52%. The positive correlation but ($r=.72$) between parental score on laxness on over-reactivity was now of medium size.

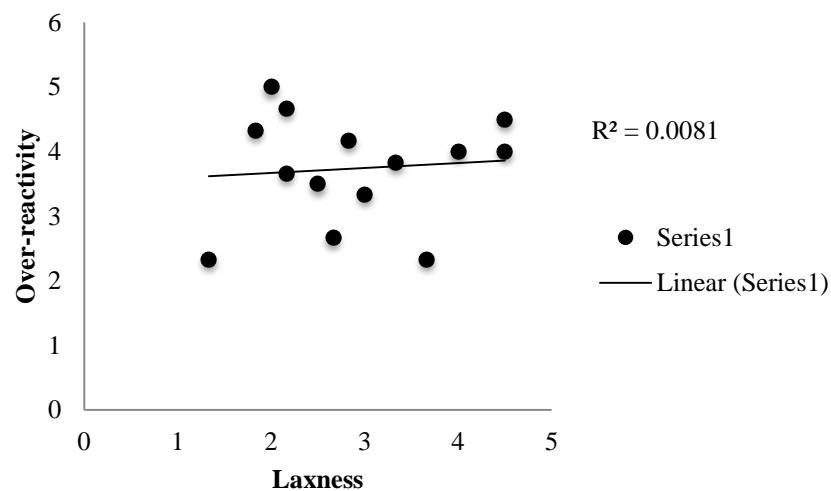


Figure 9. Pre-intervention scores of parental laxness and over-reactivity compared.

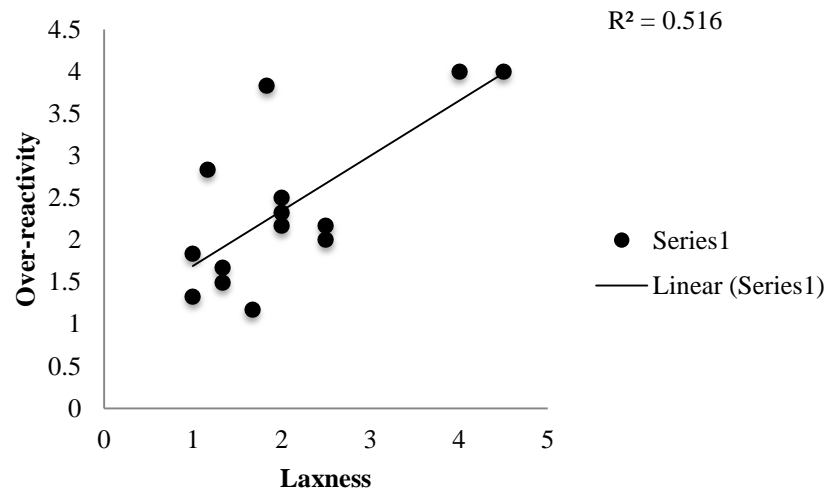


Figure 10. Post-intervention scores of parental laxness and over-reactivity compared.

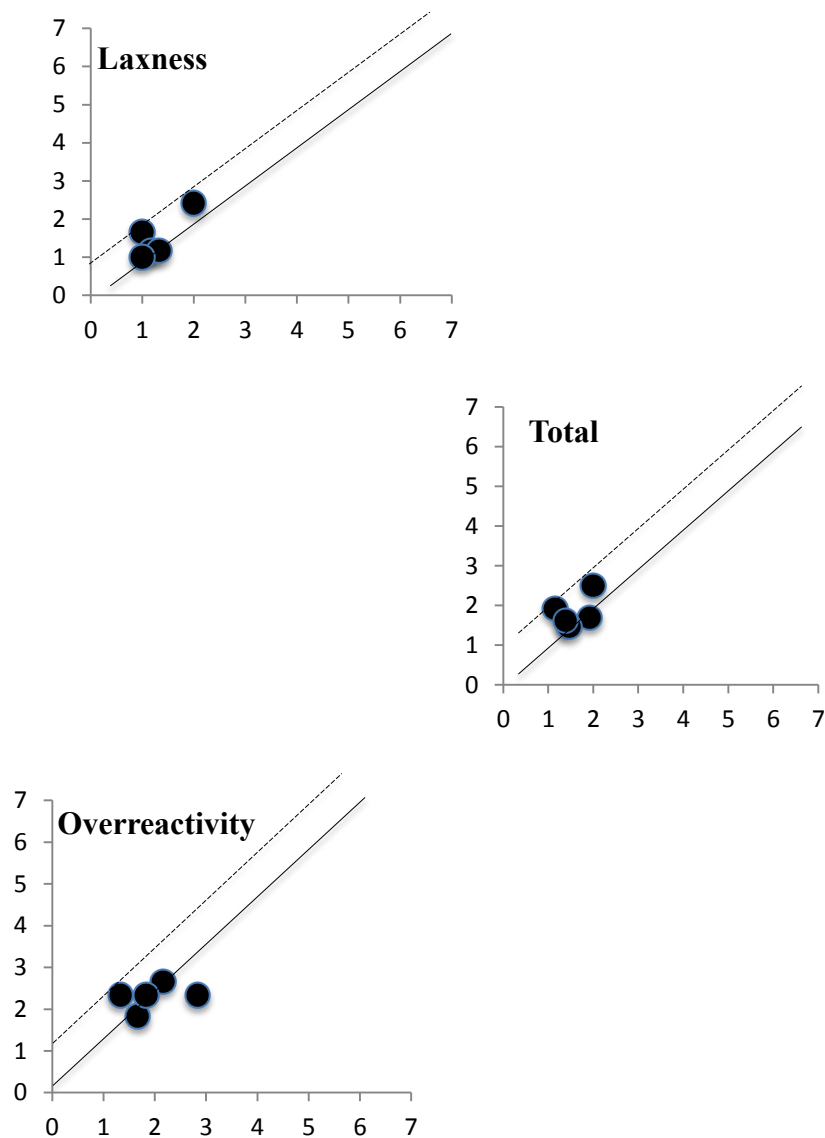


Figure 11. Parenting Scale scores at follow-up.

Figure 11: PSA at Follow-up. Figures show follow-up scores plotted against scores post-intervention. Solid line indicates line of no change. Dashed line indicates lower bound of Reliable Change Index. Left of the line indicates deterioration. Right of the line indicates improvement.

Figure 11 shows parents self-reported slight deterioration in laxness, and no change in over-reactivity. Total PSA scores show a slight deterioration, however none of these changes were outside the lower bound of the Reliable Change Index.

Research Aim Two: Parental Wellbeing

Research aim two was to find out if GTPPP enhanced parents' psychological wellbeing. Table 11 reports the group-level summary statistics for the DASS-21. Table 11 shows the mean for depression and anxiety were below the clinical cutoff, whereas mean reported stress fell into the "mildly stressed" category. Highest participant scores show the maximum threshold reached for depression, anxiety and stress respectively were: severe, normal, and severe. The intervention was found to have a large and significant effect on decreasing parental self-reported depression symptoms $d = -.81 [-1.55, -.04]$, stress symptoms $d = -.07 [-1.28, .11]$, and total symptoms $d = -.10 [-1.85, .16]$. However, the effect on self-reported anxiety symptoms was medium but nonsignificant $d = -.51 [-1.08, 0.08]$.

Table 11

Summary Means table for DASS-21 Pre and Post Intervention

	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Scale	<i>n</i>		<i>M (SD)</i>		CI		<i>min.</i>		<i>max.</i>	
Depression	14	13	2.50 (2.98)	1.00 (0.91)	1.56	0.50	0	0	12	3
Anxiety	14	13	0.86 (1.17)	0.38 (0.77)	0.61	0.42	0	0	3	2
Stress	14	13	5.71 (4.01)	3.38 (2.60)	2.10	1.41	0	0	15	8
Overall	14	13	9.07 (6.83)	4.77 (3.35)	3.58	1.82	0	0	27	10

Note: *n*= number of participants, CI = confidence interval; *M* = mean; *SD*= standard deviation.

Figure 12 shows, prior to intervention, one (7%), three (21%), and no participants (0%) respectively were in the clinical or borderline range of functioning (cut-off) for depression, stress and anxiety respectively. A visual analysis of Figure 12 shows minimal variation in depression and anxiety scores, but larger variation in self-reported stress symptoms. Figure 12 also shows that after the intervention no participants remained in the clinical range for any of the subscales of the DASS-21.

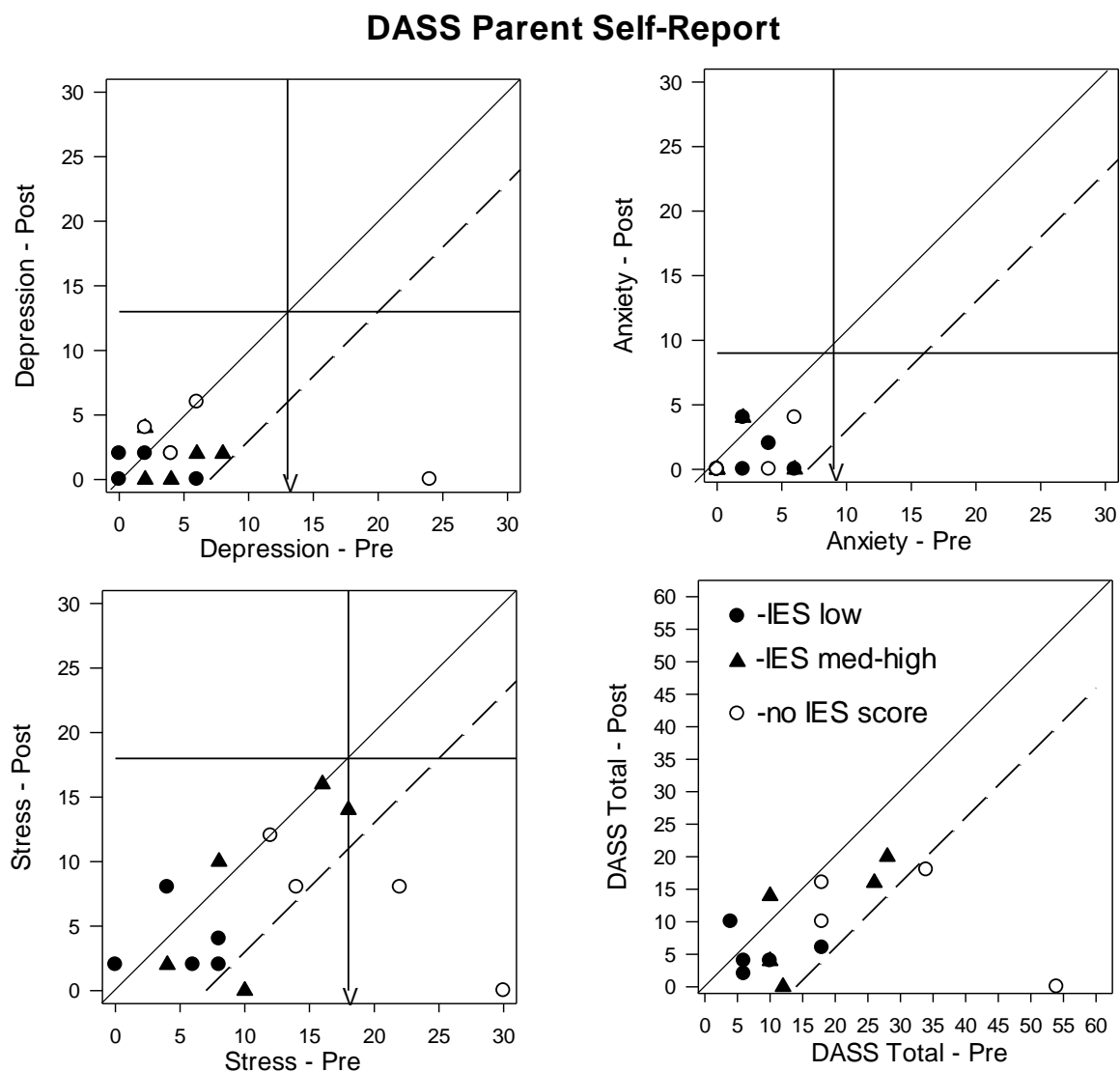


Figure 12. DASS-21 Parent Self Report

Figure 12: Depression, Anxiety, Stress and Total Score for the DASS-21, with scores doubled. Axes are truncated for Depression, Anxiety, and Stress plots to help display data.

Solid diagonal line represents the line of no effect; dashed diagonal line = lower bound of the Reliable Change Index. IES = Impact of Event Scale.

Table 12 shows mean DASS-21 scores separated by IES-R categories. Prior to the intervention the mean scores were higher in the med/high group than the low IES group, the largest difference was in stress score, 5.60 and 2.60 respectively, lowering, to 4.20 and 1.80, respectively after the intervention. The intervention appeared to be successful in reducing mean levels of depression, anxiety and stress symptoms irrespective of IES-R category.

Table 12

Descriptive Statistics for DASS-21 by IES

		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
IES-R	Scale	<i>n</i>		<i>M (SD)</i>		CI		<i>min.</i>		<i>max.</i>	
No	Depression	4	3	4.50 (5.07)	12.00 (1.00)	4.96	1.13	1	1	12	3
	Anxiety	4	3	1.25 (1.50)	0.67 (1.15)	1.47	1.31	0	0	3	2
	Stress	4	3	9.75 (4.11)	4.67 (1.15)	4.03	1.31	6	4	15	6
	Overall	4	3	15.50 (8.54)	7.33 (2.08)	8.37	2.36	9	5	27	9
Low	Depression	5	5	1.20 (1.30)	0.60 (0.55)	1.14	0.48	0	0	3	1
	Anxiety	5	5	0.60 (0.89)	0.20 (0.45)	0.78	0.39	0	0	2	1
	Stress	5	5	2.60 (1.67)	1.80 (1.30)	1.47	1.14	0	0	4	4
	Overall	5	5	4.40 (2.79)	2.60 (1.52)	2.45	1.33	2	0	9	5
Med/ High	Depression	5	5	2.20 (1.30)	0.80 (0.84)	1.14	0.73	1	0	4	2
	Anxiety	5	5	0.80 (1.30)	0.40 (0.89)	1.14	0.78	0	0	3	2
	Stress	5	5	5.60 (2.88)	4.20 (3.56)	2.53	3.12	2	0	9	8
	Overall	5	5	8.60 (4.51)	5.40 (4.22)	3.95	3.70	5	0	14	10

Note: *n*= number of participants, CI = confidence interval; *M* = mean; *SD*= standard deviation.

DASS-21 Maintenance.

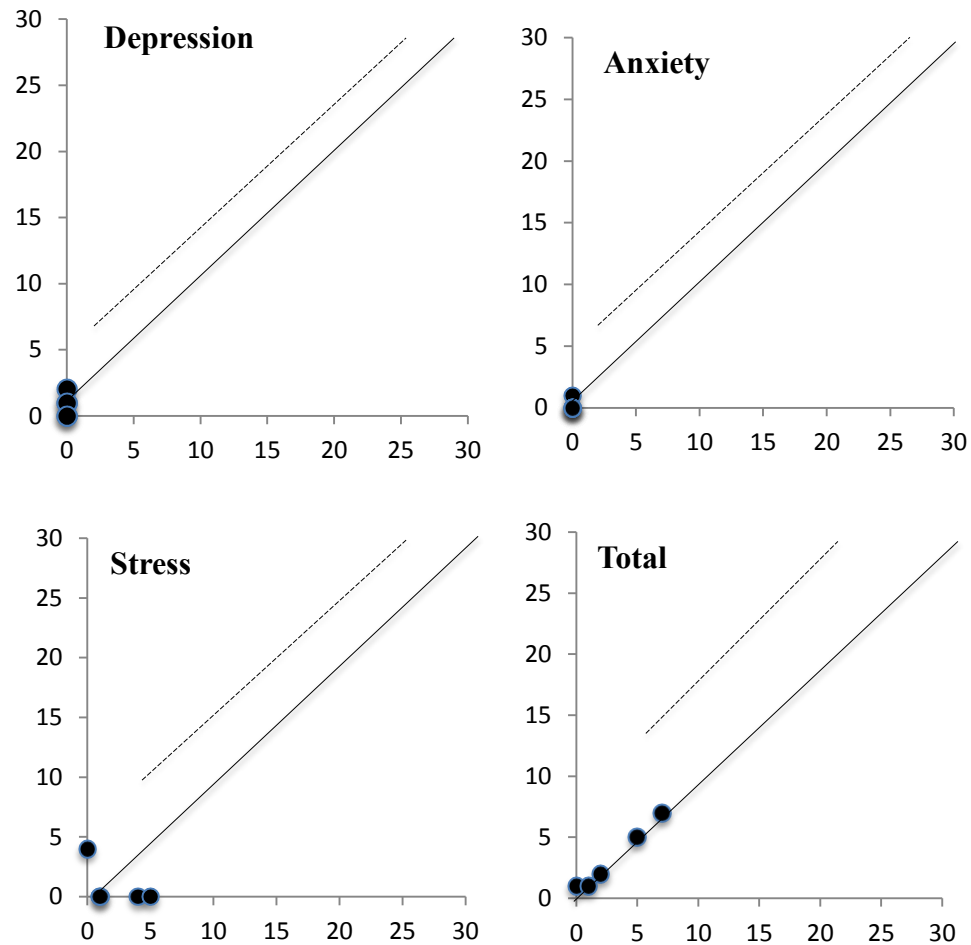


Figure 13. DASS-21 at Follow-up.

Note: Figures show follow-up scores plotted against scores post-intervention. Solid line indicates line of no change. Dashed line indicates lower bound of Reliable Change Index. Left of the solid line indicates deterioration; right indicates improvement.

Figure 13 shows no reliable change occurred between shortly after the intervention and at three months follow-up.

Research Aim Three: Parent-Teen Conflict

The third research aim in the current study was to find out if GTPPP decreased conflict between parents and their adolescents. Table 13 reports the group-level summary statistics ($n = 12$).

Table 13

Summary Statistics of the CBQ

	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
Scale	<i>n</i>		<i>M (SD)</i>		CI		<i>min.</i>		<i>max.</i>		<i>d</i>
CBQ(P)	12	12	9.25 (5.88)	4.67 (3.70)	3.33	2.09	2	0	18	12	-0.95*
CBQ (A)	10	10	3.90 (3.11)	4.90 (3.60)	0.61	0.42	0	0	9	11	0.30

Note: CBQ(P)= CBQ completed by parent on adolescent; CBQ(A) = CBQ completed by adolescent on parent; *n*= number of participants; CI = confidence interval; *M* = mean; *SD*= standard deviation. Cohen's *d* parameters were -0.95 [-1.68, -0.15] and 0.30 [-0.49, 1.07] respectively.

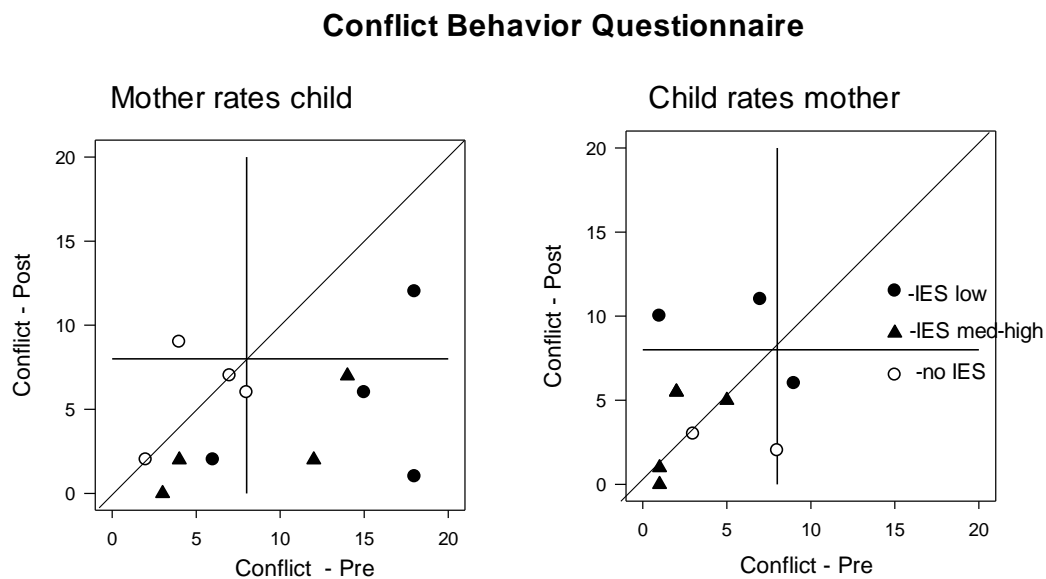


Figure 14. Conflict Behaviour Questionnaire Comparison of Pre and Post Scores

Figure 14: Modified Brinley plots showing subscale scores for the CBQ. Solid diagonal line represents the line of no effect; dashed diagonal line = lower bound of the Reliable Change Index. IES = Impact of Event Scale. Higher/lower scores indicate greater difficulty for all subscales behaviour. Clinical cut offs are 2SD above the means of the non-distressed family norms (Ralph & Sanders, 2005).

Prior to the intervention, six (50%), seven (50%) and three participants (33%) respectively were in the clinical or borderline range of functioning (relative to the cut-off set at 2 SD above the non-distressed mean (Ralph & Sanders, 2005)) for mother self-report of conflict with adolescent, and adolescent self-reported conflict with mother. Figure 13 shows five of six (83%) and two of two (100%) participants respectively moved from clinical to non-clinical levels of following the intervention. Note that one parent and two adolescents showed reliable deterioration in self-reported conflict with adolescent or parent respectively shortly after the intervention.

Table 14

CBQ by Parent on Adolescent Categorised by IES

	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
IES-R	<i>n</i>		<i>M (SD)</i>		CI		<i>min.</i>		<i>max.</i>	
No	4	4	5.25 (2.75)	6.00 (2.94)	2.70	2.88	2.00	2.00	8.00	9.00
Low	4	4	14.25 (5.68)	5.25 (4.99)	5.57	4.89	6.00	1.00	18.00	12.00
Med/High	4	4	8.25 (5.56)	2.75 (2.99)	5.45	2.93	3.00	0.00	14.00	7.00

Note: *n*= number of participants; CI = confidence interval; *M* = mean; *SD*= standard deviation.

Table 14 shows parental ratings of conflict with their adolescent on the CBQ, separated by IES-R category. Mean scores CBQ were highest for low IES-R parents 14.25 (5.25) followed by medium/high IES 8.25 (2.75) and no IES (5.25, 6.00).

To explore the relationship between parental and adolescent ratings of conflict scatterplots were constructed with linear regression fitted (see fig. 15 and 16). Figures 15 and 16 show prior to the intervention adolescents' score on the CBQ accounted for 24% of the variance on parental scores ($r = .49$), but after the intervention the correlation became trivial ($r = .01$) and variance accounted for decreased to 0.01%.

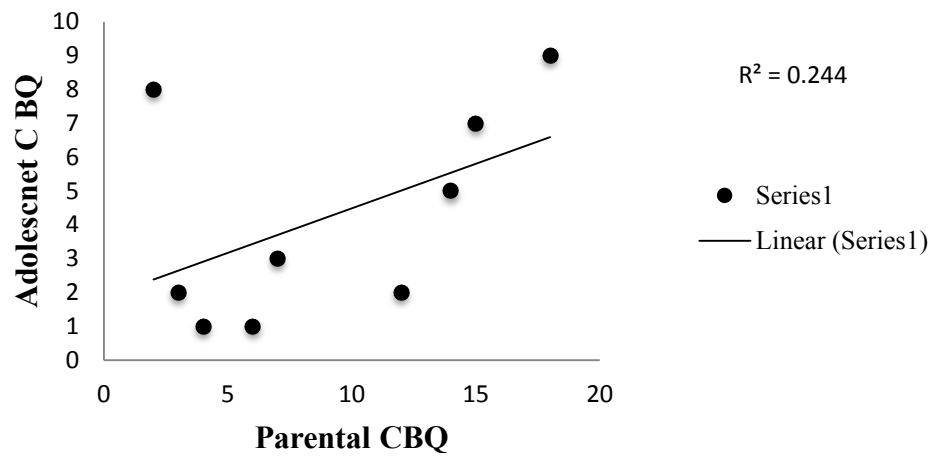


Figure 15. Parental and Adolescent Relationship on CBQ (Pre).

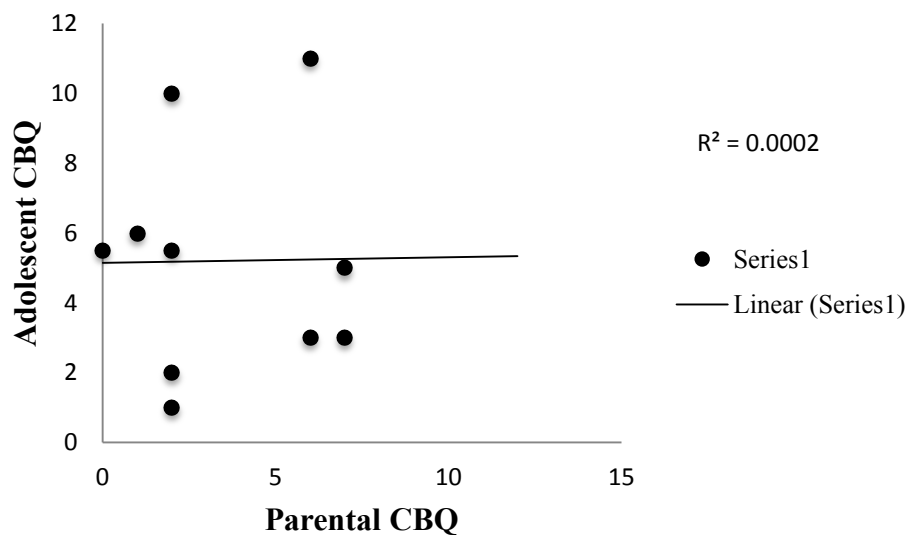


Figure 16. Parental and Adolescent Relationship on CBQ (Post).

CBQ Maintenance.

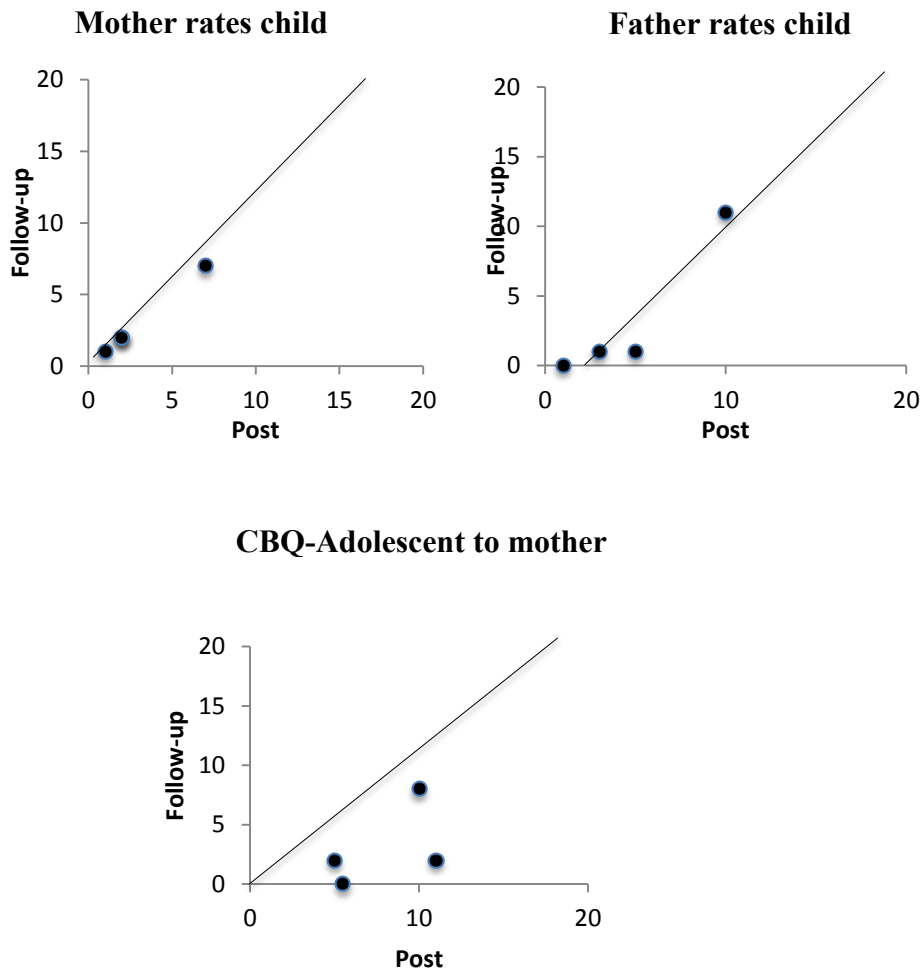


Figure 17. CBQ comparison of post and follow-up scores.

Figure 17 shows no reliable changes in parental ratings of conflict with their teenager between post-intervention and follow-up. Adolescent self-reports of conflict with their mothers decreased.

Research Aim Four: Adolescent Adjustment

The fourth and last research aim of the current study was to find out if GTPPP enhances adolescent adjustment as measured by the Strengths and Difficulties Questionnaire (SDQ). Table 15 reports the group-level summary statistics.

Table 15

SDQ Descriptive Statistics

SDQ Emotional			SDQ Conduct		
	Pre	Post		Pre	Post
<i>n</i>	14	14	<i>n</i>	14	14
<i>M</i>	2.79	1.93	<i>M</i>	3.50	2.86
<i>SD</i>	2.01	1.59	<i>SD</i>	2.07	2.32
<i>CI</i>	1.05	0.83	<i>CI</i>	1.08	1.21
<i>max.</i>	7.00	4.00	<i>max.</i>	9.00	9.00
<i>min.</i>	0.00	0.00	<i>min.</i>	1.00	0.00

SDQ Peer Relationships			SDQ Hyperactivity		
	Pre	Post		Pre	Post
<i>n</i>	14	14	<i>n</i>	14	14
<i>M</i>	2.71	2.64	<i>M</i>	4.43	4.00
<i>SD</i>	1.94	1.78	<i>SD</i>	2.62	2.66
<i>CI</i>	1.02	0.93	<i>CI</i>	1.37	1.39
<i>max.</i>	6.00	6.00	<i>max.</i>	8.00	8.00
<i>min.</i>	0.00	0.00	<i>min.</i>	0.00	0.00

SDQ Prosocial Behaviour		
	Pre	Post
<i>n</i>	14	14
<i>M</i>	5.43	6.14
<i>SD</i>	2.21	2.07
<i>CI</i>	1.16	1.08
<i>max.</i>	10.00	10.00
<i>min.</i>	2.00	2.00

SDQ Total Difficulties			SDQ Total Impact		
	Pre	Post		Pre	Post
<i>n</i>	14	14	<i>n</i>	13	13
<i>M</i>	13.43	11.64	<i>M</i>	2.00	2.00
<i>SD</i>	6.63	6.79	<i>SD</i>	2.20	2.58
<i>CI</i>	3.47	3.56	<i>CI</i>	1.20	1.40
<i>max.</i>	25.00	28.00	<i>max.</i>	7.00	7.00
<i>min.</i>	3.00	4.00	<i>min.</i>	0.00	0.00

Note: *n*= number of participants; *CI* = confidence interval; *M* = mean; *SD*= standard deviation.

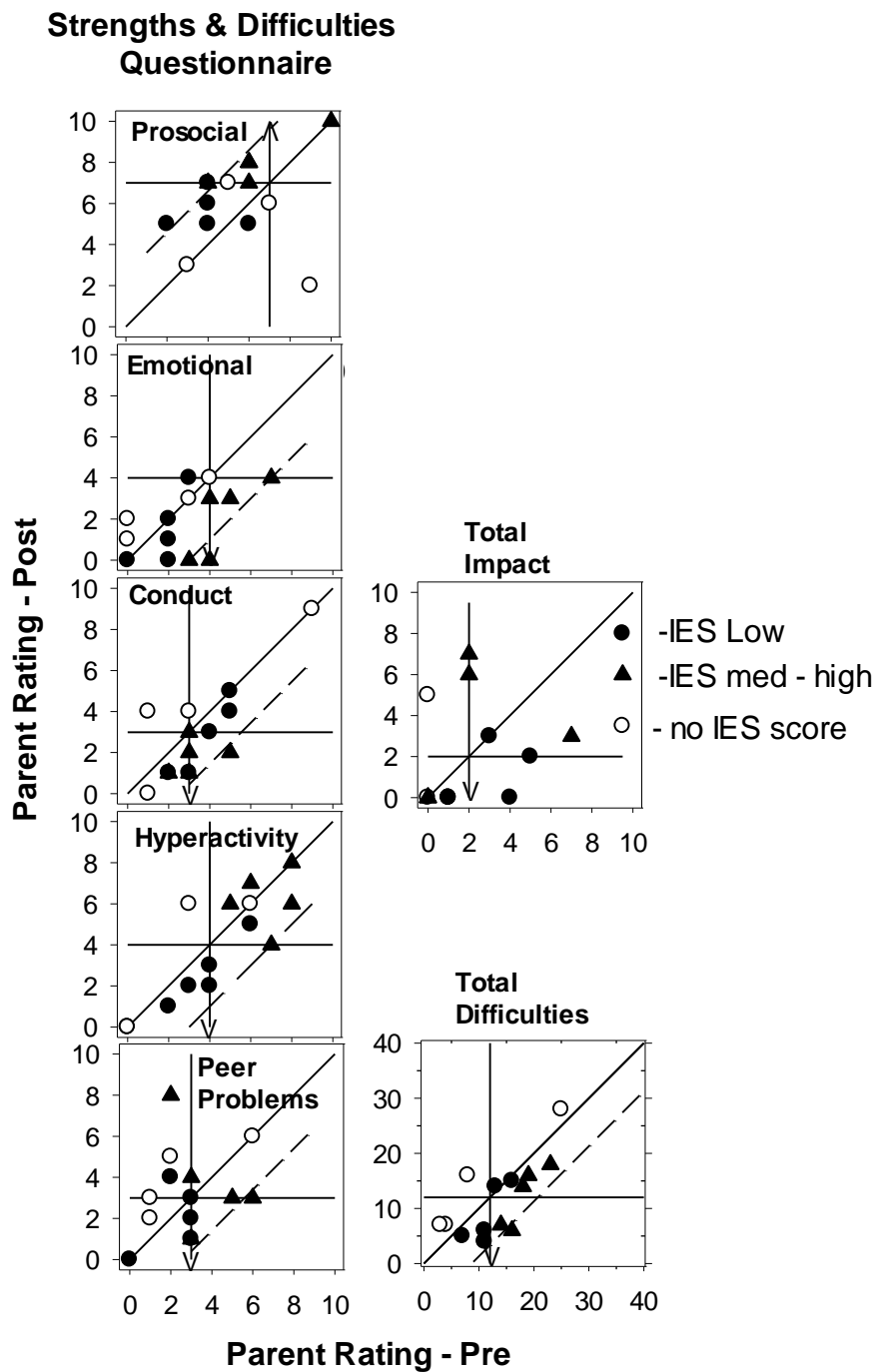


Figure 18. SDQ

Figure 18. Modified Brinley plots showing components of the Strengths and Difficulties Questionnaire (SDQ). Each data point shows an individual adolescent participant's SDQ score as rated by their parent before (Pre) and after the family had received GTPPP ($n = 14$). Families were differentiated into those with low Impact of Event Scale

(IES) scores, medium to high scores, or were lacking an IES score. The horizontal and vertical lines mark the clinical cut-off scores (from Mellor, 2005).

Prior to the intervention, ten (91%), four (29%) nine participants (64%), nine (64%), seven (50%), and eight (57%) respectively were in the clinical or borderline range of functioning (cut-off) for pro-social behaviour, emotional behaviour, conduct behaviour, hyperactivity, peer problems and total difficulties respectively. Figure 18 shows after intervention ten (91%), 0 (0%), three (21%), seven (50%), eight (57%), and seven (50%) participants respectively were in or borderline to the clinical cut-off. Note that one participant reported reliable deterioration in conduct behaviour, and prosocial behaviour and two participants reported reliable deterioration in peer problems shortly after the intervention.

Table 16

SDQ Emotion by IES

	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
IES-R	<i>n</i>		<i>M (SD)</i>		CI		<i>min.</i>		<i>max.</i>	
No	4	4	1.75 (2.06)	2.50 (1.29)	2.70	2.88	2.00	2.00	8.00	9.00
Low	5	5	1.80 (1.10)	1.40 (1.67)	5.57	4.89	6.00	1.00	18.00	12.00
Med/High	5	5	4.60 (1.52)	2.00 (1.87)	5.45	2.93	3.00	0.00	14.00	7.00

Note: *n*= number of participants; CI = confidence interval; *M* = mean; *SD*= standard deviation.

Table 17

SDQ Conduct by IES

	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
IES-R	<i>n</i>		<i>M (SD)</i>		CI		<i>min.</i>		<i>max.</i>	
No	4	4	3.50 (3.79)	4.25 (3.69)	3.71	3.61	1.00	0.00	9.00	9.00
Low	5	5	3.80 (1.30)	2.80 (1.79)	1.14	1.57	2.00	1.00	5.00	5.00
Med/High	5	5	3.20 (1.10)	1.80 (0.84)	0.96	0.73	2.00	1.00	5.00	3.00

Note: *n*= number of participants; CI = confidence interval; *M* = mean; *SD*= standard deviation.

Table 18

SDQ Hyperactivity by IES

	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
IES-R	<i>n</i>		<i>M (SD)</i>		CI		<i>min.</i>		<i>max.</i>	
No	4	4	2.25 (2.87)	3.00 (3.46)	2.81	3.39	0.00	0.00	6.00	6.00
Low	5	5	3.80 (1.48)	2.60 (1.52)	1.30	1.33	2.00	1.00	6.00	5.00
Med/High	5	5	6.80 (1.30)	6.20 (1.48)	1.14	1.30	5.00	4.00	8.00	8.00

Note: *n*= number of participants; CI = confidence interval; *M* = mean; *SD*= standard deviation.

Table 19

SDQ Peer Relationships by IES

	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
IES-R	<i>n</i>		<i>M (SD)</i>		CI		<i>min.</i>		<i>max.</i>	
No	4	4	2.50 (2.38)	4.00 (1.79)	2.33	1.79	1.00	2.00	6.00	6.00
Low	5	5	2.20 (1.30)	2.00 (1.58)	1.14	1.39	0.00	0.00	3.00	4.00
Med/High	5	5	3.40 (2.30)	2.20 (1.64)	2.02	1.44	0.00	0.00	6.00	4.00

Note: *n*= number of participants; CI = confidence interval; *M* = mean; *SD*= standard deviation.

Table 20

SDQ Prosocial Behaviour by IES

	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
IES-R	<i>n</i>		<i>M (SD)</i>		CI		<i>min.</i>		<i>max.</i>	
No	4	4	6.00 (2.58)	4.50 (2.38)	2.53	2.33	3.00	2.00	9.00	7.00
Low	5	5	4.00 (1.41)	5.60 (0.89)	1.24	0.78	2.00	5.00	6.00	7.00
Med/High	5	5	6.40 (2.19)	8.00 (1.22)	1.92	1.07	4.00	7.00	10.00	10.00

Note: *n*= number of participants; CI = confidence interval; *M* = mean; *SD*= standard deviation.

Table 21

SDQ Total Difficulties

	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
IES-R	<i>n</i>		<i>M (SD)</i>		CI		<i>min.</i>		<i>max.</i>	
No	4	4	10.00 (10.23)	14.50 (9.95)	10.03	9.75	3.00	7.00	25.00	28.00
Low	5	5	11.60 (3.29)	8.80 (5.26)	2.88	4.61	7.00	4.00	16.00	15.00
Med/High	5	5	18.00 (3.39)	12.20 (5.40)	2.97	4.74	14.00	6.00	23.00	18.00

Note: *n*= number of participants; CI = confidence interval; *M* = mean; *SD*= standard deviation.

Table 22

SDQ Total Impact

	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
IES-R	<i>n</i>		<i>M (SD)</i>		CI		<i>min.</i>		<i>max.</i>	
No	3	3	0.33 (0.58)	1.67 (2.89)	0.65	3.27	3.00	7.00	1.00	5.00
Low	5	5	2.80 (1.79)	1.00 (1.41)	1.57	1.24	7.00	4.00	5.00	3.00
Med/High	5	5	2.20 (2.86)	3.20 (3.27)	2.51	2.87	14.00	6.00	7.00	7.00

Note: *n*= number of participants; CI = confidence interval; *M* = mean; *SD*= standard deviation.

Tables 16 – 22 show mean SDQ scores categorised by IES-R. Parents whose IES-R category was low reported higher average adolescent difficulties scores than either the med/high or the No IES group.

Prosocial behaviour

Parental self-reported rates of adolescent pro-social behaviour increased for seven participants, remained unchanged for two and deterioration was reported in one case. Parental reports of adolescent pro-social behaviour trended up as indicated by most participants being on the left-hand side of the line. Figure 18 shows positive reliable change for three participants, and one participant reported reliable deterioration. As a group pro-social behaviour increased from a mean of 5.43(2.21) to 6.14(2.07), this was a large but non-significant intervention effect ($d=.72$ [-.23,1.64]).

Emotional difficulties.

Parental self-reported rates of adolescent emotional difficulties reduced from pre to post intervention. The majority of participants reported change in the positive direction, reporting decreased adolescent emotional difficulties. Three participants showed positive reliable change, no participants showed reliable deterioration. One participant moved from the clinical to the non-clinical range. As a group, emotional difficulties decreased from a mean of 2.79(2.01) to 1.93(1.59) this reflected a medium and significant intervention effect ($d= -.68$ [-1.27, -.06]). There was a slight floor effect with 4 participants reporting 0 adolescent emotional problems following intervention. Those who reported to be mediumly or highly impacted by the earthquakes reported increased emotional problems prior to intervention, followed by low IES-R, with no obvious pattern in those who did not report IES-R.

Conduct problems.

Most participants reported a reduction in adolescent conduct problems after the intervention. Two participants moved from the clinical to non-clinical range. One

participant reported positive reliable change, and one participant showed reliable deterioration. As a group emotional difficulties decreased from a mean of 3.50(2.07) to 2.86(2.32) this reflected a medium and significant intervention effect ($d = -.58 [-1.05, -.093]$ (s). There were no obvious effects of IES-R on conduct difficulties.

Hyperactivity.

Parental self-reported rates of adolescent hyperactivity reduced from pre-assessment to post-assessment for seven participants, remained unchanged for three participants, and increased for three participants. No participants showed reliable positive change and one participant showed reliable deterioration one outlying participant moved from the non-clinical to the clinical range. As a group hyperactivity difficulties decreased from a mean of 4.43(2.62) to 4.00(2.66) this reflected a medium but non-significant intervention effect ($d = 0.34 [-.16, .813]$). Those who reported to be mediumly or highly impacted by the earthquakes reported highest hyperactivity difficulties prior to intervention 6.80(1.30), followed by low IES-R 3.80 (1.48), with no obvious pattern in those who did not report IES-R 2.25 (2.87). Intervention effects were seen least in those who did not report their IES-R with all participant data points falling on the line or indicated deterioration, with a mean of 2.50 increasing to 4.00.

Peer problems.

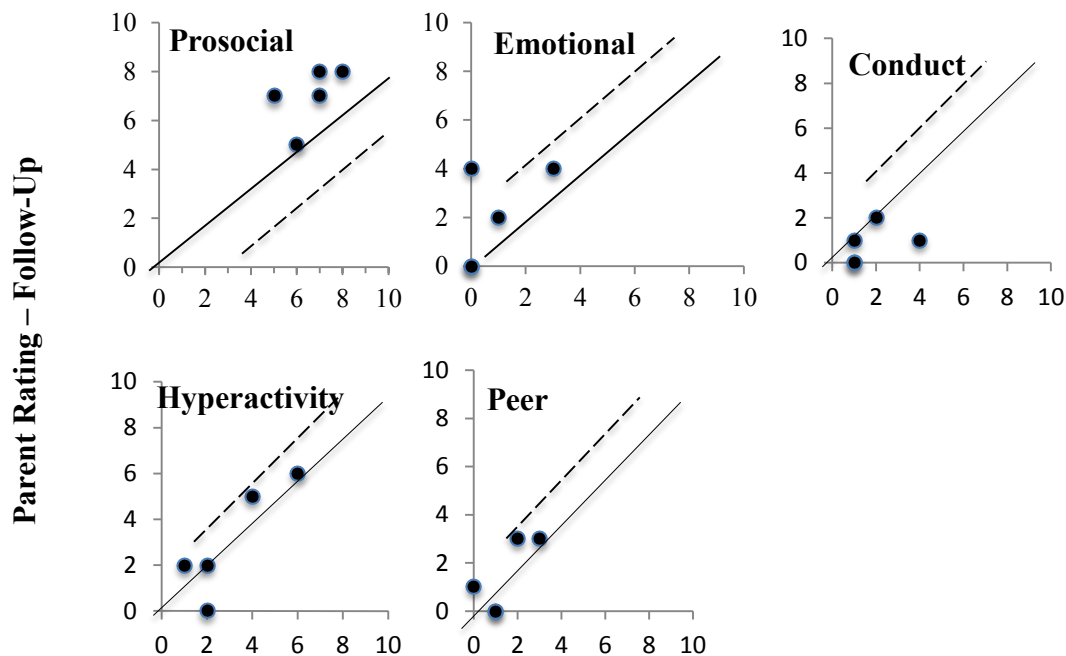
Most participants reported a deterioration (i.e., an increase) in adolescent peer problems. Three participants showed reliable deterioration; only one participant showed reliable positive change.

Total difficulties.

Parents reported a reduction in total adolescent difficulties after the intervention. Parental reports of adolescent total difficulties increased for those parents who did not complete the IES-R, parents who reported low or medium/high impacts of the earthquakes

reported less total difficulties after the intervention. Those parents who reported medium/high impact received the most benefit.

SDQ Maintenance.



Parent Rating - Post

Figure 19 Parental rating of adolescent difficulties, comparison of post and follow-up.

Figure 19 shows a continuation of positive effects for adolescent prosocial behaviour and reduction in conduct problems. A slight deterioration in reported emotional difficulties was seen. No change was seen in parental reports of hyperactivity scores or peer problems. *Satisfaction with the experience*

Table 23 shows self-reported the satisfaction ratings of participants at follow up. It shows all participants regardless of IES were at least somewhat satisfied (over 50%), and the majority of the participants were at least quite satisfied (67%).

Table 23

Client Satisfaction at Follow-Up

IES Score	Satisfaction (%)
No	57
	100
Low	100
	61
Med/High	86
	86

Chapter 4

Discussion

The current study makes a novel contribution to the assessment of the effectiveness of GTPPP in a post-earthquake population. Preliminary analysis of GTPPP shows positive outcomes for most participating parents, with significant reductions of targeted risk factors including: parenting competence, family functioning and parental adjustment. Group summary statistics suggest that, as a group, these parents were not experiencing clinically elevated depression, anxiety and/or stress symptoms although some parents did score in the clinical or borderline range.

As a preliminary study into the effectiveness of such a program with a parents and families affected by a natural disaster, and given so few treatments have been established as effective in that context (Roberts & Everly, 2006), it was important that this study recorded reductions in overall scores on variables identifying identified risk factors, such as low parenting competence, poor family functioning and low parental adjustment, and comparable increases in the overall scores on variables measuring of protective factors such as adolescent prosocial behaviour and adaptive parenting strategies. Many of these results are consistent with previous empirical findings of GTPPP on promoting family functioning and parental adjustment (Ralph & Sanders, 2003a). To provide some context for the results the study's participants will be described and reviewed, as typical or atypical, in comparison to previous data for Canterbury- resident adults who participated in prior research into the effects of the earthquake in 2011 (Rucklidge, Blampied, Gorman, Gordon, & Sole, 2014) Next, the results from each hypothesis are interpreted. Lastly, the implications, study limitations, and suggestions for future research are discussed.

Participants Characteristics

Depression anxiety and stress symptoms.

Rucklidge et al. (2014) found in a post-earthquake sample of Canterbury residents, means (and SDs) for the DASS-42 depression, anxiety, stress and total were 14.2 (1.4), 12.1 (1.1), 22.2 (1.4) and 48.5 (3.4) respectively. Compared to a sample of post-earthquake Canterbury residents in 2014, the GTPPP participants reported slightly lower rates of depression symptoms, much lower anxiety symptoms and slightly higher self-reported stress symptoms. This suggests that GTPPP participants were affected by the Canterbury earthquakes somewhat differently than those of the Rucklidge et al. (2014) study. However, due to a comparatively small number of participants it is very difficult to infer whether this difference is due to a particular subset of the population accessing GTPPP or a random occurrence.

A comparison of adolescent and parental self-reports of depression, anxiety and stress symptoms on the DASS-21 revealed no correlation prior to the intervention. However, it should be noted that DASS-21 scores for parents were consistently higher than those of the adolescents. This finding is inconsistent with Kiliç, Kiliç, and Aydin (2011) who reported a positive significant correlation between parental and adolescent scores on the DASS-21. Possible explanations for this finding include: (a) adolescents did not take the task seriously and therefore their self-reports are not accurate, (b) despite the measures taken to provide adolescents confidentiality separately to their parents, due to home circumstance adolescents felt unable to report honestly. This finding is consistent with recent research suggesting adolescent and parental reports of adolescent adjustment in the aftermath of disaster can be inconsistent (G. A. Bonanno, C. R. Brewin, K. Kaniasty, & A. M. La Greca, 2010; Sprague et al., 2014; Stover, Hahn, Im, & Berkowitz, 2010). Fan et al. (2011) examined the anxiety and depression symptoms of 2,250 adolescents 6 months after the 2008 Wenchuan earthquake in China. They found that 16%, 41% and 25% of participants reported clinical symptoms of PTSD, anxiety, and

depression, respectively. The current study was inconsistent with these findings, reporting non-clinical levels of symptoms for all participants. In the future increased GTPPP facilitator or researcher contact could improve the reliability of adolescent self-report.

Potential impact of the earthquakes.

To examine potential distress from the major Canterbury earthquakes participants completed the IES-R. Half of participants (50%) reported the Canterbury earthquakes as having a low impact on them and their families three years after the major Canterbury earthquakes, another 35% reported the earthquakes as having a medium impact, and 14% reported the earthquake as having a high impact. These findings were more positive than that of the CERA (2012) report where nearly a quarter (23%) of residents expressed living with stress for most or all of the time over the past year, and believed that as a direct result of the earthquakes their quality of life had decreased significantly or decreased to some extent (CERA, 2012). The finding that half of Canterbury residents reported a small impact of the Canterbury earthquakes on their everyday life is consistent with the finding of the CERA (2012) report and the prototypical outcome trajectories found by Bonanno (2005).

Parental self-reported impact of event scale scores prior to the intervention were higher than that of pre-existing post-earthquake Canterbury data (Rucklidge et al., 2014). Rucklidge et al. (2014) found mean IES-R avoid, IES-R intrusion, IES-R arousal, of 1.6, 2.0, and 2.2 respectively. This suggests GTPPP participants were possibly more affected by the Canterbury earthquakes than the community participants investigated by Rucklidge et al. (2014). This difference may have resulted from the nature of GTPPP self-referral.

As a group those with lower IES-R scores scored lower on all DASS-21 subscales both prior to and post-intervention. This finding is supported by a strong positive

correlation between Parental IES-R and Parental DASS-21 scores prior to the intervention. This suggests parents who were highly impacted by the earthquakes were experiencing negative impacts on their wellbeing, in particular stress. This finding is in line with current research of post-disaster populations (George A. Bonanno et al., 2010; Bonanno & Mancini, 2012; Kar & Bastia, 2006; La Greca et al., 1998; Lonigan et al., 1991; McFarlane et al., 2009; Raphael & Maguire, 2009; Weems et al., 2007; Yule et al., 2000).

All of those who did not complete the IES-R scale reported higher average levels of stress than the other IES-R groups. This could suggest parents who did not complete the IES-R scale did so, not because they did not believe the earthquakes had impacted them, but because they ‘already had enough on their plate’ and completing an extra measure was for those participants beyond their current resources. In the future it would be useful to keep record of the reasons participants declined to complete measures included in the research. However, during this study it was difficult to note this at the time due to the high influences of facilitators on the current study, including facilitator lead data collection and participant contact.

Participant Retention

Participants who were most likely to drop-out from the study or fail to complete post-intervention questionnaires were those who did not complete the IES-R measures (60%) prior to the intervention. This was followed by participants who self-reported as highly impacted by the Canterbury earthquakes (50%). In the future anecdotal reports of participant satisfaction, including reason for dropouts or non-completion of research data would be very useful for establishing a programme with high participant retention. Such qualitative findings could instruct better delivery of the GTPPP to meet wider needs, especially those of the highly impacted.

Aim One: Parenting Competence.

Research question one sought to find if GTPPP enhances parenting competence for parents in a post-natural disaster context. It was found that the majority of participants who were reported as in the clinical or borderline of functioning for laxness, over-reactivity and total parenting competence had moved to non-clinical or borderline levels following the intervention. Short-term intervention effects found the majority of parents (13 of 14) improved on dysfunctional discipline styles overall. The intervention the greatest reductions in a maladaptive parenting were in over-reactivity. These results support previous findings by Sanders, Markie-Dadds, and Turner (2003) and Ralph and Sanders (2003a) that GTPPP promotes parenting competence, and leads to significant reductions on measures of the parenting styles: laxness and over-reactivity.

It was found that generally parents scored higher on over-reactivity than laxness prior to the intervention, with mean (standard deviation) of 3.74 (0.83) and 2.89 (0.99) respectively. These findings are consistent with Salari et al. (2014) who found comparable means for parenting over-reactivity and laxness for parents of 11- to 16-year old teenagers ($n = 20$) of 3.95 (1.30) and 1 2.57 (.83) respectively. However, it should be noted that in the study by Salari et al. (2014) parents who did not report serious problem behaviours (SDQ total of 14 or over) by the target child were excluded from the intervention. Conversely, the current study included six of fourteen adolescents who reported non-clinical levels of externalising behaviours. Therefore, as the two studies have comparable means it may suggest participants in the current study experienced additional stressors on parenting than parents in the X study. Feasibly additional stressors for parents may have included the Canterbury earthquake sequences.

Parents who reported the earthquakes to have had a minimal impact on their everyday lives, as indicated by scores on the IES-R, scored lower on maladaptive parenting styles than those who reported medium or high levels of impact. This finding supports that of Hafstad et al. (2012) who found that after a natural disaster high impacted parents changed parenting behaviours, often becoming anxious and over-reactive. Additionally, the positive correlation between laxness score and over-reactivity score increased after the intervention from 0.81% to 51.6%. This may suggest parents used the skills from intervention to target the ineffective parenting techniques they perceived to have the largest impact on their parenting practice. These findings also support those of Stallman and Ralph (2007), who found parents who completed the GTPPP reported fewer over-reactive parenting strategies than parents in either the standard or waitlist conditions. Therefore, GTPPP may be effective in a post-disaster context in decreasing maladaptive parenting styles that contribute to poor family functioning.

Aim Two: Parental Wellbeing.

Research aim two was to find out if GTPPP enhances parents' psychological wellbeing after the Canterbury earthquakes. It was found that all participants who reported clinical levels of depression, stress and anxiety prior to the intervention no longer did so after the intervention. The majority of participants reported less depression, anxiety and stress following the intervention. The intervention appeared extremely successful in lowering reported stress symptoms for two participants in particular, moving from above clinical cut-off to well-below. Overall, treatment effects were positive but overall reliable change only occurred for two participants. This may be due to noticeable floor effects where participants' scores were extremely low prior to the intervention and although decreased could not decrease below zero, which would be

needed to sit outside the line of no-change. Notably there was no reliable deterioration in participant scores. This suggests GTPPP may be successful in promoting positive adjustment in post-earthquake Canterbury.

Highest participant scores show the maximum threshold reached for depression, anxiety and stress respectively were: severe, normal, and severe. Additionally, prior to the intervention participants mean stress level was twice that of any other measure. This is consistent with the findings of the CERA-wellbeing report (CERA, 2014), that the largest on-going negative impact on Canterbury residents in 2014 was increased stress. This may explain why parents reported greater abnormality in self-reported stress symptoms than that of depression or anxiety.

Prior to the intervention the mean DASS-21 scores were higher in the med/high group than the low IES-R group, and the largest difference was in stress score, 5.60 and 2.60 respectively, lowering, to 4.20 and 1.80 respectively after the intervention. The intervention appeared to be successful in reducing depression, anxiety and stress symptoms including all participants who reported to have been affected by the Canterbury earthquake sequences a little, and also for those who self-reported as being affected a lot.

Aim Three: Parent-Teen Conflict

Research aim three was to find out if GTPPP decreases conflict between parents, as measured by the CBQ, and their adolescents. Self-reported mean conflict scores reported on the CBQ by parents on adolescents decreased from 9.25 (5.88) to 4.67 (3.70). This finding is consistent with current empirical evidence supporting the use of GTPPP to reduce adolescent-parental conflict (Ralph & Sanders, 2003a, 2006). Therefore, future implementation of GTPPP may be successful in reducing parental-adolescent conflict, even in a post-earthquake context.

Interestingly, prior to the intervention parents reported greater conflict than their adolescent, with mean values (SD) of 9.25 (5.88) and 3.90 (3.11) respectively. After the intervention parents reported conflict with adolescent decreased to 4.67 (3.70) whereas reported conflict with parents by the adolescent increased to 4.90 (3.60). This may be due to adolescents perceiving increased parental involvement and problem solving as ‘meddling’, therefore perceiving conflict to have increased. Participants who did not complete the IES-R reported a non-reliable increase in conflict with their adolescent. This may be due to these participants (a) allocating less time and resources to their progress in GTPPP, or (b) being less realistic of the relationship with their adolescent. Interestingly, adolescents reported additional reductions in conflict behaviour at follow-up, three months after the intervention. This may suggest a delay between when parents and adolescents notice a reduction in conflict. Replication of this study would be needed to establish if this is an anomaly or possibly unique to participants who have experienced at PTE.

Parents who reported low levels of impact from the Canterbury earthquakes on the IES-R reported average conflict as higher than that of the no IES-R group or medium to high IES-R group; mean pre and post scores of 14.25 (5.68) to 5.25 (4.99), 5.25(2.75) to 6.00(2.94) and 8.25 (5.56) to 2.75 (2.99) respectively. The apparent reverse effects of IES-R level on perceived conflict may be due in part to parents who reported low IES-R attributing greater weight to the negative effects of the relationship with their adolescent than those who reported high IES-R. A review of Burley (2015) and Sutherland (*under review*) qualitative work may provide greater insight to this finding.

Aim Four: Adolescent Adjustment

Research aim four was to find out if GTPPP enhances adolescent adjustment as measured by the Strengths and Difficulties Questionnaire (SDQ). A total of five subscales

(pro-social, emotional, conduct, hyperactivity, and peer relationships) were evaluated, along with an analysis of the total difficulties reported by parents. Notably parents self-reports of children in GTPPP were significantly higher than those expected in a normal population. This finding is consistent with previous research (Kumar & Fonagy, 2013). Kumar and Fonagy (2013) measured the strengths and difficulties of earthquake affected children, three and a half years after the event, in India aged 8 to 16 years. Kumar and Fonagy (2013) parental reports were, in all measures excluding emotional difficulties, moderately lower than those in the current study with means of 3.42 (2.16), 1.61 (1.44), 3.16 (1.66), 2.28 (1.74), 8.20 (1.88) and 10.47 (4.39) for emotional, conduct, hyperactivity, peer, prosocial, and total difficulties respectively. Modified Brinley plot analysis suggested GTPPP was helpful in promoting adolescent pro-social behaviour, reducing adolescent emotional difficulties, conduct problems.

However, some participants reported deterioration (i.e., an increase) in hyperactivity the majority of participants reported deterioration of their adolescents' problems with peers. These results indicate GTPPP was not helpful in reducing adolescent hyperactivity or peer problems. In the future using single-subject design with an established baseline would aid understanding of whether (a) if GTPPP directly contributed to the deterioration of adolescent peer problems in a post-earthquake situation, (b) if GTPPP did not change peer problems resulting in participants who were on a negative trajectory to continue on one, therefore attributing deterioration to changes over time, (c) if apparent deterioration was in fact due to changes in parents perspective.

Overall, most parents reports of adolescent difficulties decreased after the intervention. However, only one participant demonstrated reliable improvement. Largely, the findings suggest the implementation of GTPPP in a post-earthquake situation may have a slight benefit to all participants independently of their IES-R score. A review of the

qualitative findings of Burley (2015) and Sutherland (*under review*) may provide more insight to the reasons for both detrimental and positive effects.

Research limitations and future directions

Several limitations challenge the efficacy of this study. Firstly, the study design and methodology was largely outside of researchers hands, as the offer to collect data was offered by the MOE. There was a substantial lack of control over the study including how the group was ran (although ran with an accredited facilitator), timing of the programme, selection of subjects, and no ability to randomise or include a control comparison group resulting in the use of an AB quasi experimental design. This substantially limited the researchers' ability to draw causal conclusions about the efficacy of GTPPP implementation with the post-earthquake group. Only direction of change could be detected without permitting any conclusion as to what the causes of the changes might have been. Nevertheless, the current study adds to the large empirical base of Positive Parenting research, to the smaller base of GTPPP research and adds a novel contribution to the usefulness of GTPPP with the post-earthquake Canterbury residents.

Secondly, participant retention in the research programme was 58%. Without qualitative data it is difficult to infer what drove participant retention. However, the GTPPP utilises readings and homework tasks, which may put up barriers to participation. Additionally, the cultural appropriateness of GTPPP has not been established with Maori. It is feasible that increased focus on whanau and inter-relationships may increase participant retention for Māori participants in New Zealand (Macfarlane, Blampied, & Macfarlane, 2011). However, research on a comparable program – Incredible Years – with primary age children has shown no differential effects between Maori and Pakeha parents (Fergusson, Stanley, & Horwood, 2009). In the future it would be useful to explore comparisons between GTPPP between Maori and Pakeha parents.

Due to moderate participant retention there were large gaps in some data collection. Specifically, follow-up data was missing for over half of the original participants, which made analysis of the durability of any changes observed impractical. Similarly, many adolescents were not invited to participate by their parents, or declined to participate in the current study. Consequently, much of the adolescent-sourced data could not be reliably interpreted. Future research would benefit from greater focus of participant retention, and greater collection of data from adolescents to provide a more holistic picture of family functioning.

Thirdly, participants responded to the additional earthquake questionnaires that were delivered alongside the standard Triple P measures. Many of these measurements were not completed by questionnaires as they felt they did not apply to them, as they felt they were minimally impacted by the earthquake or were not in Christchurch at the time of the earthquake. It might, therefore, be presumed that those who did not complete the additional earthquake questionnaires would have scored minimally on the CRIE-S and IES-R. Furthermore, whether parents did not experience the earthquake or simply did not want to complete the IES-R measures we are not able to determine. In the future reasons for participants not completing measures should be discussed and recorded to aid data analysis.

Participants volunteered for the programme and are, therefore, self-selected. Regrettably, few families who reported that the earthquakes had a large impact on their everyday lives participated. Instead a distribution of impacted participants was seen as in accordance with Bonnao (2005). In the future specific targeting of highly impacted families would enable conclusions to be drawn about the suitability of GTPPP as brief intervention measure to improve family functioning for these families. Additionally, participation from mothers was much greater than that of fathers, however due to the small number of fathers, to preserve *n* the data was not analysed separately. In the future a separate analysis of the

efficacy of GTPPP with fathers in a post-earthquake context would support intervention implementation.

The researcher originally set out to observe three groups in a multiple baseline-design, which would have permitted conclusions to be drawn about the causal effects of participation in GTPPP. However, due to circumstances outside the researcher's control this was unable to be completed. Nevertheless, qualitative analysis would aid in the interpretation of the study's findings. It should be noted when the current study is read in combination with Burley (2015) and Sutherland (*under review*) a more holistic picture of the efficacy of the current intervention can be seen. In the future a multiple-subject design may greatly aid understanding of the impact of GTPPP on family functioning, and enable families to be compared to a stable baseline therefore increasing ability to determine intervention effect.

Lastly, all of the measures utilised in the current study were either self-reports or reports from one dyad to another (e.g., parent to adolescent or adolescent to parent). Therefore data is subject to the usual disadvantages of such measures including: the problem of over-estimating adherence; inaccurate self-reporting caused by recall bias, social desirability bias and/or errors in self-observation (Nunes et al., 2009). Although accessing multiple sources of data could help mitigate these disadvantages, when under time and resource constraints self-report still remains one of the most simple and inexpensive ways to measure psychological outcomes (Nunes et al., 2009).

In conclusion, this study revealed that implementation of the GTPPP three years after a natural disaster promoted family functioning and parental adjustment. These findings support previous findings of GTPPP efficacy (Ralph & Sanders, 2004). However, future research is needed to ascertain the reliability of these results, and qualitative research would greatly add to the current findings. Nevertheless, this research adds a valuable contribution to

the limited interventions that support families after a natural disaster. This research could assist social policy makers to identify which interventions may promote positive family functioning in potentially vulnerable families.

References

- All Right? (2013). *Becoming All Right? A summary of the research behind the wellbeing campaign for Canterbury, April 2013*. Retrieved from
- Arnold, D. S., O'Leary, S. G., Wolff, L. S., & Acker, M. M. (1993). The Parenting Scale: a measure of dysfunctional parenting in discipline situations. *Psychological assessment*, 5(2), 137.
- Ballenger, J. C., Davidson, J. R., Lecrubier, Y., Nutt, D. J., Marshall, R. D., Nemeroff, C. B., . . . Yehuda, R. (2004). Consensus statement update on posttraumatic stress disorder from the international consensus group on depression and anxiety. *Journal of Clinical Psychiatry*, 65, 55-62.
- Bandura, A., & McClelland, D. C. (1977). Social learning theory.
- Barlow, D. H. N., Hersen, M., Barlow, M. D., Nock, M., & Hersen, M. (2009). *Single case experimental designs: Strategies for studying behavior for change*.
- Blampied, N. (2014). Using modified Brinley plots to analyse behaviour change in individuals within groups. *Under review*.
- Bonanno, G. A. (2004). Loss, trauma, and human resilience: have we underestimated the human capacity to thrive after extremely aversive events? *American psychologist*, 59(1), 20.
- Bonanno, G. A. (2005). Resilience in the face of potential trauma. *Current directions in psychological science*, 14(3), 135-138.
- Bonanno, G. A., Brewin, C., Kaniasty, K., & La Greca, A. (2010). Weighing the Costs of Disaster: Consequences, Risks, and Resilience in Individuals, Families, and Communities. *Psychological Science in the Public Interest*, 11(1), 1-49.
doi:10.1177/1529100610387086

- Bonanno, G. A., Brewin, C. R., Kaniasty, K., & La Greca, A. M. (2010). Weighing the costs of disaster consequences, risks, and resilience in individuals, families, and communities. *Psychological Science in the Public Interest*, 11(1), 1-49.
- Bonanno, G. A., & Mancini, A. (2012). Beyond resilience and PTSD: Mapping the heterogeneity of responses to potential trauma. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4(1), 74-83. doi:10.1037/a0017829
- Bonanno, G. A., Westphal, M., & Mancini, A. D. (2011). Resilience to loss and potential trauma. *Annual review of clinical psychology*, 7, 511-535.
- Boon, H. J., Cottrell, A., King, D., Stevenson, R. B., & Millar, J. (2012). Bronfenbrenner's bioecological theory for modelling community resilience to natural disasters. *Natural Hazards*, 60(2), 381-408.
- Bronfenbrenner, U. (1988). Interacting systems in human development. Research paradigms: Present and future. *Persons in context: Developmental processes*, 25-49.
- Burley, J. S. (2015). *Parents' need for and experiences of teen triple P following the Christchurch earthquakes*. . University of Canterbury.
- Canterbury Earthquake Recovery Authority. (2013). *Canterbury Wellbeing Index December 2013*. Retrieved from Christchurch, New Zealand:
- Canterbury Earthquake Recovery Authority. (2015). Flat land residential red zone. Retrieved from <http://cera.govt.nz/residential-red-zone>
- CERA. (2012). *Wellbeing Survey 2012*. Retrieved from <http://cera.govt.nz/sites/default/files/common/cera-wellbeing-survey-2012-report-20120220.pdf>
- CERA. (2013a). *2013 What's Up? Youth Wellbeing Survey*. Retrieved from <http://cera.govt.nz/sites/default/files/common/youth-wellbeing-survey-wellbeing.pdf>

- CERA. (2013b). *Wellbeing Survey April 2013*. Retrieved from <http://cera.govt.nz/sites/default/files/common/cera-wellbeing-survey-april-2013-report-20131120.pdf>
- CERA. (2014). *Wellbeing Survey April 2014*. Retrieved from Christchurch, New Zealand: <http://cera.govt.nz/sites/default/files/common/cera-wellbeing-survey-april-2014-report.pdf>
- Christchurch City Council. (2011). Media Release. Retrieved from <http://www.ccc.govt.nz/thecouncil/newsmedia/mediareleases/2011/201102235.aspx>
- Chu, J. T. W., Bullen, P., Farruggia, S. P., Dittman, C. K., & Sanders, M. R. (2015). Parent and adolescent effects of a universal group program for the parenting of adolescents. *Prevention Science, 16*(4), 609-620.
- Cobham, V. E., & McDermott, B. M. (2014). Perceived Parenting Change and Child Posttraumatic Stress Following a Natural Disaster. *JOURNAL OF CHILD AND ADOLESCENT PSYCHOPHARMACOLOGY, 24*(1), 18-23.
doi:10.1089/cap.2013.0051
- Cohen, S., & McKay, G. (1984). Social support, stress and the buffering hypothesis: A theoretical analysis. *Handbook of psychology and health, 4*, 253-267.
- Collins, W. A., Maccoby, E. E., Steinberg, L., Hetherington, E. M., & Bornstein, M. H. (2000). Contemporary research on parenting: the case for nature and nurture. *American psychologist, 55*(2), 218.
- Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). Applied behavior analysis.
- Costa, N. M., Weems, C. F., & Pina, A. A. (2009). Hurricane Katrina and youth anxiety: The role of perceived attachment beliefs and parenting behaviors. *Journal of Anxiety Disorders, 23*(7), 935-941.

- Crawford, J. R., Garthwaite, P. H., Howell, D. C., & Gray, C. D. (2004). Inferential methods for comparing a single case with a control sample: modified t-tests versus mycroft et al.'s (2002) modified anova. *Cognitive Neuropsychology*, 21(7), 750-755.
- Davey, F. (2011). Natural hazards—the Christchurch earthquakes. *New Zealand Journal of Geology and Geophysics*, 54(2), 149-150.
- Deković, M., Janssens, J. M. A. M., & Van As, N. M. C. (2003). Family predictors of antisocial behavior in adolescence. *Family Process*, 42(2), 223-235.
doi:10.1111/j.1545-5300.2003.42203.x
- Dinenberg, R. E., McCaslin, S. E., Bates, M. N., & Cohen, B. E. (2014). Social support may protect against development of posttraumatic stress disorder: Findings from the Heart and Soul Study. *American Journal Of Health Promotion*, 28(5), 294-297.
- Eisenstadt, T. H., Eyberg, S., McNeil, C. B., Newcomb, K., & Funderburk, B. (1993). Parent-child interaction therapy with behavior problem children: Relative effectiveness of two stages and overall treatment outcome. *Journal of Clinical Child Psychology*, 22(1), 42-51.
- Epstein, N. B., Baldwin, L. M., & Bishop, D. S. (1983). The McMaster family assessment device*. *Journal of Marital and Family Therapy*, 9(2), 171-180.
- Fan, F., Zhang, Y., Yang, Y., Mo, L., & Liu, X. (2011). Symptoms of posttraumatic stress disorder, depression, and anxiety among adolescents following the 2008 Wenchuan earthquake in China. *Journal of Traumatic Stress*, 24(1), 44-53. doi:10.1002/jts.20599
- Fergusson, D., Stanley, L., & Horwood, L. J. (2009). Preliminary data on the efficacy of the Incredible Years basic parent programme in New Zealand. *Australian and New Zealand Journal of Psychiatry*, 43(1), 76-79.
- Frick, P. J., & Viding, E. (2009). Antisocial behavior from a developmental psychopathology perspective. *Development and Psychopathology*, 21(04), 1111-1131.

Garfat, T. (2003). *A child and youth care approach to working with families* (Vol. 25): Routledge.

Garton, A. F., Zubrick, S. R., & Silburn, S. R. (1995). The Western Australian child health survey: A pilot study. *Australian and New Zealand Journal of Psychiatry*, 29(1), 48-57.

Gee, D. G., & Casey, B. (2015). The impact of developmental timing for stress and recovery. *Neurobiology of stress*, 1, 184-194.

GeoNet. (2016). Canterbury Aftershocks. Retrieved from <http://info.geonet.org.nz/display/home/Canterbury+Aftershocks>

Gewirtz, A., Forgatch, M., & Wieling, E. (2008). Parenting practices as potential mechanisms for child adjustment following mass trauma. *Journal of Marital and Family Therapy*, 34(2), 177-192.

Goodman, R. (1999). The extended version of the Strengths and Difficulties Questionnaire as a guide to child psychiatric caseness and consequent burden. *Journal of child psychology and psychiatry*, 40(05), 791-799.

Goodman, R., Ford, T., Simmons, H., Gatward, R., & Meltzer, H. (2000). Using the Strengths and Difficulties Questionnaire (SDQ) to screen for child psychiatric disorders in a community sample. *The British Journal of Psychiatry*, 177(6), 534-539.

Goodyear, R. (2014). *Housing in greater Christchurch after the earthquakes: Trends in housing from the Census of Population and Dwellings 1991–2013*. Retrieved from Wellington, New Zealand: <http://www.stats.govt.nz/>

Gordon, H. A., Rucklidge, J. J., Blampied, N. M., & Johnstone, J. M. (2015). Clinically significant symptom reduction in children with attention-deficit/hyperactivity disorder treated with micronutrients: an open-label reversal design study. *JOURNAL OF CHILD AND ADOLESCENT PSYCHOPHARMACOLOGY*, 25(10), 783-798.

- Grant, S., Cross, E., Wraith, J. E., Jones, S., Mahon, L., Lomax, M., . . . Hare, D. (2013). Parental social support, coping strategies, resilience factors, stress, anxiety and depression levels in parents of children with MPS III (Sanfilippo syndrome) or children with intellectual disabilities (ID). *Journal of inherited metabolic disease*, 36(2), 281-291.
- Grych, J. H., Jouriles, E. N., Swank, P. R., McDonald, R., & Norwood, W. D. (2000). Patterns of adjustment among children of battered women. *Journal of consulting and clinical psychology*, 68(1), 84.
- Hafstad, G. S., Haavind, H., & Jensen, T. K. (2012). Parenting after a natural disaster: A qualitative study of Norwegian families surviving the 2004 Tsunami in Southeast Asia. *Journal of child and family studies*, 21(2), 293-302.
- Henry, J. D., & Crawford, J. R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, 44(2), 227-239.
- Holden, G. W., & Miller, P. C. (1999). Enduring and different: a meta-analysis of the similarity in parents' child rearing. *Psychological bulletin*, 125(2), 223.
- Irvine, A. B., Biglan, A., Smolkowski, K., Metzler, C. W., & Ary, D. V. (1999). The effectiveness of a parenting skills program for parents of middle school students in small communities. *Journal of consulting and clinical psychology*, 67(6), 811.
- Jacobson, N. S., Follette, W. C., & Revenstorf, D. (1984). Psychotherapy outcome research: Methods for reporting variability and evaluating clinical significance. *Behavior therapy*, 15(4), 336-352.
- Jacobson, N. S., & Truax, P. (1991). Clinical significance: a statistical approach to defining meaningful change in psychotherapy research. *Journal of consulting and clinical psychology*, 59(1), 12.

- Kar, N., & Bastia, B. K. (2006). Post-traumatic stress disorder, depression and generalised anxiety disorder in adolescents after a natural disaster: a study of comorbidity. *Clinical Practice and Epidemiology in Mental Health*, 2(1), 17.
- Kemp, S., Chan, K. Y., & Grimm, C. (2013). The experience and future of businesses displaced by earthquake from central Christchurch, New Zealand. *Australasian Journal of Disaster and Trauma Studies*, 2013(2), 47-55.
- Kiliç, C., Kiliç, E. Z., & Aydin, I. O. (2011). Effect of relocation and parental psychopathology on earthquake survivor-children's mental health. *The Journal of nervous and mental disease*, 199(5), 335-341.
- King, L. A., King, D. W., Fairbank, J. A., Keane, T. M., & Adams, G. A. (1998). Resilience–recovery factors in post-traumatic stress disorder among female and male Vietnam veterans: Hardiness, postwar social support, and additional stressful life events. *Journal of personality and social psychology*, 74(2), 420.
- Kramer, D. N., & Landolt, M. A. (2011). Characteristics and efficacy of early psychological interventions in children and adolescents after single trauma: A meta-analysis. *European journal of psychotraumatology*, 2.
- Kumar, M., & Fonagy, P. (2013). Differential effects of exposure to social violence and natural disaster on children's mental health. *Journal of Traumatic Stress*, 26(6), 695-702.
- La Greca, A. M., Silverman, W. K., & Wasserstein, S. B. (1998). Children's predisaster functioning as a predictor of posttraumatic stress following Hurricane Andrew. *Journal of consulting and clinical psychology*, 66(6), 883.
- Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress*, 17(1), 11-21.
- doi:10.1023/B:JOTS.0000014671.27856.7e

- Lonigan, C., Shannon, M., Finch, A., Daugherty, T., & Taylor, C. (1991). Children's reactions to a natural disaster: Symptom severity and degree of exposure. *Advances in Behaviour Research and Therapy*, 13(3), 135-154.
- Lovibond, P. F., & Lovibond, S. H. (1995a). Manual for the Depression. *Anxiety, Stress Scales*.
- Lovibond, P. F., & Lovibond, S. H. (1995b). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour research and therapy*, 33(3), 335-343.
- Macfarlane, A., Blampied, N., & Macfarlane, S. (2011). Blending the clinical and the cultural: A framework for conducting formal psychological assessment in bicultural settings. *New Zealand Journal of Psychology*, 40(2), 5-15.
- March, J. S., Amaya-Jackson, L., Terry, R., & Costanzo, P. (1997). Posttraumatic symptomatology in children and adolescents after an industrial fire. *Journal of the American Academy of Child & Adolescent Psychiatry*, 36(8), 1080-1088.
- McDermott, B. M., & Cobham, V. E. (2012). Family functioning in the aftermath of a natural disaster. *BMC psychiatry*, 12(1), 55-55. doi:10.1186/1471-244x-12-55
- McDermott, B. M., & Cobham, V. E. (2014). A stepped-care model of post-disaster child and adolescent mental health service provision. *European journal of psychotraumatology*, 5.
- McElhaney, K. B., Allen, J. P., Stephenson, J. C., & Hare, A. L. (2009). Attachment and autonomy during adolescence. *Handbook of adolescent psychology*.
- McFarlane, A. (1987). Family functioning and overprotection following a natural disaster: the longitudinal effects of post-traumatic morbidity. *The Australian and New Zealand journal of psychiatry*, 21(2), 210-218. doi:10.3109/00048678709160914

- McFarlane, A., Van Hooff, M., & Goodhew, F. (2009). Anxiety disorders and PTSD.
- McLaughlin, K. A., Fairbank, J. A., Gruber, M. J., Jones, R. T., Lakoma, M. D., Pfefferbaum, B., Kessler, R. C. (2009). Serious emotional disturbance among youths exposed to Hurricane Katrina 2 years postdisaster. *Journal of the American Academy of Child & Adolescent Psychiatry*, 48(11), 1069-1078.
- Ministry of Health. (2012). *Annual Report on Drinking-water Quality 2010-2011 Appendix 3 Christchurch Earthquake Report*. Retrieved from Wellington, New Zealand:
- Newell, J., Johnston, D. M., & Beaven, S. (2012). *Population Movements Following the 2010-2011 Canterbury Earthquakes: Summary of Research Workshops, November 2011 and Current Evidence*: GNS Science.
- News, B. (2010, Sept 6, 2010). New Zealand earthquake 'damaged 100,000 homes'. *BBC News*. Retrieved from <http://www.bbc.com/news/world-asia-pacific-11191105>
- Nowak, C., & Heinrichs, N. (2008). A comprehensive meta-analysis of Triple P-Positive Parenting Program using hierarchical linear modeling: Effectiveness and moderating variables. *Clinical child and family psychology review*, 11(3), 114-144.
- Nunes, V., Neilson, J., O'Flynn, N., Calvert, N., Kuntze, S., Smithson, H., Clyne, W. (2009). Medicines Adherence: involving patients in decisions about prescribed medicines and supporting adherence.
- Patterson, G. R. (1982). *Coercive family process* (Vol. 3): Castalia Publishing Company.
- Patterson, G. R. (2002). The early development of coercive family process (pp. 25-44). US: American Psychological Association.
- Qin, Y., Zhou, Y., Fan, F., Chen, S., Huang, R., Cai, R., & Peng, T. (2016). Developmental Trajectories and Predictors of Prosocial Behavior Among Adolescents Exposed to the 2008 Wenchuan Earthquake. *Journal of Traumatic Stress*, 29(1), 80-87.
doi:10.1002/jts.22064

RadioNZ. (2012, 14 September 2012). 13 schools to close, others to merge in Christchurch.

Retrieved from <http://www.radionz.co.nz/news/regional/115789/13-schools-to-close,-others-to-merge-in-christchurch>

Ralph, A., & Sanders, M. R. (2003a). Preliminary evaluation of the Group Teen Triple P program for parents of teenagers making the transition to high school. *Australian e-Journal for the Advancement of Mental Health*, 2(3), 169-178.

Ralph, A., & Sanders, M. R. (2003b). Preliminary Evaluation of the Group Teen Triple P Program for Parents of Teenagers Making the Transition to High School. *Australian e-Journal for the Advancement of Mental Health, The*, 2(3), 169-178.

Ralph, A., & Sanders, M. R. (2004). The 'Teen Triple P' Positive Parenting Program: A Preliminary Evaluation (pp. 1). Woden: Australian Institute of Criminology.

Ralph, A., & Sanders, M. R. (2005). *Facilitators Manual for Group Teen Triple P - Revised Edition*. Milton, QLD, Australia: Triple P International Pty Ltd.

Ralph, A., & Sanders, M. R. (2006). The 'Teen Triple P' Positive Parenting Program: A Preliminary Evaluation. *Youth Studies Australia*, 25(2), 41-48.

Ralph, A., Sanders, M. R., & Stallman, H. (2004). Teen Triple P: A universal approach to reducing risk factors for behavioural and emotional problems in adolescents at the transition to high school. *AUSTRALIAN JOURNAL OF PSYCHOLOGY*, 56(Journal Article), 217-217.

Raphael, B., & Maguire, P. (2009). Disaster mental health research: Past, present, and future. *Mental health and disasters*, 7-28.

Reijneveld, S. A., Crone, M. R., Verhulst, F. C., & Verloove-Vanhorick, S. P. (2003). The effect of a severe disaster on the mental health of adolescents: a controlled study. *The Lancet*, 362(9385), 691-696. doi:10.1016/S0140-6736(03)14231-6

- Roberts, A. R., & Everly, G. S. (2006). A meta-analysis of 36 crisis intervention studies. *Brief Treatment and Crisis Intervention*, 6(1), 10.
- Robin, A. L., & Foster, S. L. (2003). *Negotiating parent-adolescent conflict: A behavioral-family systems approach*: Guilford Press.
- Robinson, E., & Pryor, R. (2006). Strong Bonds Project: promoting family-aware youth work practice. *Developing Practice: The Child, Youth and Family Work Journal*(15), 28.
- Rucklidge, J. J., Blampied, N., Gorman, B., Gordon, H. A., & Sole, E. (2014). Psychological functioning 1 year after a brief intervention using micronutrients to treat stress and anxiety related to the 2011 Christchurch earthquakes: a naturalistic follow-up. *Human Psychopharmacology: Clinical and Experimental*, 29(3), 230-243.
- Ryan, P. (2003). *'I'm looking at the future' [electronic resource] : first report on the longitudinal evaluation of Reconnect*. Canberra: Dept. of Family and Community Services.
- Salari, R., Ralph, A., & Sanders, M. R. (2014). An Efficacy Trial: Positive Parenting Program for Parents of Teenagers. *Behaviour Change*, 31(1).
- Sameroff, A. J., & Mackenzie, M. J. (2003). Research strategies for capturing transactional models of development: The limits of the possible. *Development and Psychopathology*, 15(3), 613-640. doi:10.1017/s0954579403000312
- Sanders, M. R. (2008). Triple P-Positive Parenting Program as a Public Health Approach to Strengthening Parenting. *Journal of Family Psychology*, 22(4), 506-517. doi:10.1037/0893-3200.22.3.506
- Sanders, M. R., Kirby, J. N., Tellegen, C. L., & Day, J. J. (2014). The Triple P-Positive Parenting Program: A systematic review and meta-analysis of a multi-level system of parenting support. *Clinical Psychology Review*, 34(4), 337-357.

- Sanders, M. R., Markie-Dadds, C., Tully, L. A., & Bor, W. (2000). The triple P-positive parenting program: a comparison of enhanced, standard, and self-directed behavioral family intervention for parents of children with early onset conduct problems. *Journal of consulting and clinical psychology*, 68(4), 624.
- Sanders, M. R., Markie-Dadds, C., & Turner, K. M. (2003). *Theoretical, scientific and clinical foundations of the Triple P-Positive Parenting Program: A population approach to the promotion of parenting competence* (Vol. 1): Parenting and Family Support Centre, The University of Queensland Queensland.
- Scaramella, L. V., Sohr-Preston, S. L., Callahan, K. L., & Mirabile, S. P. (2008). A test of the Family Stress Model on toddler-aged children's adjustment among Hurricane Katrina impacted and nonimpacted low-income families. *Journal of clinical child and adolescent psychology : the official journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53*, 37(3), 530-541. doi:10.1080/15374410802148202
- Schuster, M. A., Stein, B. D., Jaycox, L. H., Collins, R. L., Marshall, G. N., Elliott, M. N., Berry, S. H. (2001). A national survey of stress reactions after the September 11, 2001, terrorist attacks. *New England Journal of Medicine*, 345(20), 1507-1512.
- Shooshtary, M. H., Panaghi, L., & Moghadam, J. A. (2008). Outcome of cognitive behavioral therapy in adolescents after natural disaster. *Journal of Adolescent Health*, 42(5), 466-472.
- Sprague, C. M., Kia-Keating, M., Felix, E., Afifi, T., Reyes, G., & Afifi, W. (2014). Youth Psychosocial Adjustment Following Wildfire: The Role of Family Resilience, Emotional Support, and Concrete Support. *Child & Youth Care Forum*, 44(3), 433-450. doi:10.1007/s10566-014-9285-7

- Stallman, H. M., & Ralph, A. (2007). Reducing risk factors for adolescent behavioural and emotional problems: a pilot randomised controlled trial of a self-administered parenting intervention. *Australian e-Journal for the Advancement of Mental Health*, 6(2), 1-4.
- Stover, C. S., Hahn, H., Im, J. J., & Berkowitz, S. (2010). Agreement of parent and child reports of trauma exposure and symptoms in the early aftermath of a traumatic event. *Psychological Trauma: Theory, Research, Practice, and Policy*, 2(3), 159.
- Sundin, E. C., & Horowitz, M. J. (2002). Impact of Event Scale: psychometric properties. *The British Journal of Psychiatry*, 180(3), 205-209.
- Sutherland, F. (under review). *Group Teen Triple P: Promotion of parent self-regulation and effects on their adolescent children*. University of Canterbury.
- Taylor, T. K., & Biglan, A. (1998). Behavioral family interventions for improving child-rearing: A review of the literature for clinicians and policy makers. *Clinical child and family psychology review*, 1(1), 41-60.
- Tedeschi, R. G., & Calhoun, L. G. (2004). " Posttraumatic growth: Conceptual foundations and empirical evidence". *Psychological inquiry*, 15(1), 1-18.
- Turner, K. M. T., & Sanders, M. R. (2006). Dissemination of evidence-based parenting and family support strategies: Learning from the Triple P—Positive Parenting Program system approach. *Aggression and Violent Behavior*, 11(2), 176-193.
doi:10.1016/j.avb.2005.07.005
- Udwin, O., Boyle, S., Yule, W., Bolton, D., & O'Ryan, D. (2000). Risk factors for long-term psychological effects of a disaster experienced in adolescence: predictors of post traumatic stress disorder. *Journal of child psychology and psychiatry, and allied disciplines*, 41(8), 969-979. doi:10.1017/s0021963099006460

UNdata. (2011). *City Population*. Retrieved from

https://www.google.co.nz/publicdata/explore?ds=z5567oe244g0ot_&met_y=population&idim=city_proper:031420&hl=en&dl=en

University of Canterbury. (2016). Dovedale Centre - Pukemanu.

Van Emmerik, A. A., Kamphuis, J. H., Hulsbosch, A. M., & Emmelkamp, P. M. (2002).

Single session debriefing after psychological trauma: a meta-analysis. *The Lancet*, 360(9335), 766-771.

Weems, C. F., Watts, S. E., Marsee, M. A., Taylor, L. K., Costa, N. M., Cannon, M. F., . . .

Pina, A. A. (2007). The psychosocial impact of Hurricane Katrina: Contextual differences in psychological symptoms, social support, and discrimination. *Behaviour research and therapy*, 45(10), 2295-2306.

Weiss, D. S. (2007). The impact of event scale: revised *Cross-cultural assessment of psychological trauma and PTSD* (pp. 219-238): Springer.

Wetherall, T. P. (2010). *Teen triple P: an evaluation utilising a within-participant design : a dissertation submitted in partial fulfilment of the requirements for the degree of Master of Education endorsed in Child and Family Psychology at the University of Canterbury*. (Dissertation/Thesis). Retrieved from

<http://canterbury.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwY2BQSE1O NDUGtppAcZ2clGhunJZmbG6caGKRAGlsmpRigrLDFak0dxNiYErNE2VQdHMNcf bQRRgdDx3KiDc0Bx8oZyjGwJsIWgCeVwLeKJYCAFc3HIY>

Yule, W., Bolton, D., Udwin, O., Boyle, S., O'Ryan, D., & Nurrish, J. (2000). The long-term psychological effects of a disaster experienced in adolescence: I: The incidence and course of PTSD. *Journal of child psychology and psychiatry*, 41(4), 503-511.

Zehnder, D., Meuli, M., & Landolt, M. A. (2010). Effectiveness of a single-session early psychological intervention for children after road traffic accidents: A randomised controlled trial. *Child and adolescent psychiatry and mental health*, 4(7), 1-10.

Zemp, M., Milek, A., Cummings, E. M., Cina, A., & Bodenmann, G. (2015). How couple- and parenting-focused programs affect child behavioral problems: a randomized controlled trial. *Journal of child and family studies*, 1-13.

Appendix A
GROUP for PARENTS of TEENS
(Triple P) Positive Parenting Programme Group



It's true our kids/children/TEENS didn't come with an instruction manual!

We have courses to become qualified in areas we are interested in.

We have instructions or manuals for pretty much everything we purchase BUT we didn't have to pass anything to become a parent and we have no instructions for growing our children. We are doing our best to raise our TEENS, often with what we have experienced or learnt not to do.

And our TEENS are going through all kinds of changes and facing pressures and circumstances that can be very confusing and distressing and as parents we want to give them the love and support they need BUT

- Do you get stuck with your TEEN in endless debates?
- Do you feel lost at times when trying to connect with and understand your TEEN?
- Do you find yourself shouting at or avoiding your TEEN in exasperation and frustration?
- Do you end up “nagging” your TEEN?
- Are you tired of picking up after them?
- Do you feel guilty for putting in consequences or or using threats to get your TEEN to listen?

Come and participate in a safe learning environment where the Triple P Parenting Group will provide you with:

- **Skills to strengthen a positive parent-teen relationship**
- **Skills to encourage desirable behaviour**
- **Skills for teaching your TEEN new behaviours and skills**
- **Skills to manage problem behaviours including emotional behaviour**
- **Skills for teaching TEENS to avoid or to responsibly manage high-risk situations**



We all need a little help to develop skills to feel more self-confident and give our kids the love and guidance they require because we know that it gets really tricky and challenging at various stages in parenting.

With a focus on positive engagement and a solution focus, this course aims to equip parents with strategies they can implement straight away.

- 5 sessions and 3 “phone coaching appointments” over 8 weeks.
- To be held on Wednesday night starting 20th August; 7.00- 9.00pm, Pukemanu-Dovedale Centre, Dovedale Ave.
- The course is free
- Please contact Suzi Hall for queries or registration; suzanne.hall@canterbury.ac.nz or ph 3667001 ex 8136.
- **LIMITED to 20 Parents**

For further Information Visit: http://en.wikipedia.org/wiki/Triple_P_%28parenting_program%29
<http://www.triplep-parenting.net/alb-en/positive-parenting/five-steps-to-positive-parenting-teenagers>

Appendix B

Email: tabitha.norton@pg.canterbury.ac.nz

28/07/2014



Evaluation of Group Teen Triple P in post-earthquake, Christchurch, New Zealand

Information Sheet for Parents

Dear Teen Triple P Participant,

I am a Masters student at the Department of Psychology, University of Canterbury, doing research for my thesis. I am currently interested in measuring the effects of the Group Teen Triple P (GTPPP) programme you are doing.

My thesis will focus on the usefulness of the Triple P Program for promoting wellbeing in Christchurch parents and their children. The results may be used to revise and improve adolescent programmes designed to enhance family relationships in New Zealand. The anonymous results will be reported to the Ministry of Education, in a thesis publication and may be reported in other community and academic settings.

I would greatly appreciate if you would take part in my current research. Your contribution will help me to build evidence for the usefulness of programs such as these.

My research will involve the following:

As part of the Group Teen Triple P Programme you will be doing, you/your partner and your child will be asked to complete short questionnaires about your family background, functioning and wellbeing that are part of the Triple P Program. I am requesting access to these results for my research. Additionally, you and your child will be asked to complete the Impact of Events Scale and the Depression Anxiety and Stress Scale (DASS-21) which seeks to measure the impact of the Christchurch Earthquakes on your family. In total there will be eight questionnaires for you to complete including three also completed by your child. These questionnaires will be implemented at four separate times, (1) prior to program commencement, (2) at the last session and (3) at a follow-up 3 months later. These self-report questionnaires would be provided by your course facilitator and be completed

during your own time within the home in stages (1) and (3) or during the session as in stage (2).

Please note that participation is very much appreciated and is completely voluntary. It in no way affects your eligibility to complete the Triple P Program. If you choose to participate by contributing your data to my project, you have the right to withdraw from the study (the project) at any time without penalty. If you withdraw, I will do my best to remove any information relating to you, provided this is practically achievable.

Please know that I will take particular care to ensure the confidentiality of all data gathered for this study. I will also take care to ensure your anonymity in any publication of the findings. Once I receive them, your name will be substituted on the questionnaires with a code number. All the data will be aggregated across the whole group of participants so you cannot be identified and will be securely stored in password protected facilities and locked storage at the University of Canterbury for five years following the study, and the raw data will then be destroyed. If you would like to receive a copy of the summary of results and final report please fill in your address on the attached consent form. Lastly, I declare that neither I nor my supervisors have any known conflicts of interest in regard to this research project.

Thank you for taking the time to read more about my study and I would like to thank you for considering participating in this research. Please if you have any questions about the study please contact the course facilitator Suzie Hall (suzanne.hall@canterbury.ac.nz or ph 3667001 ex 8136), myself (details above) or my supervisor Dr Neville Blampied at 03 364 2199 (direct) or neville.blampied@canterbury.ac.nz. Also, if you have a complaint about the study please contact the Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

If you agree to participate in this study, please complete the attached consent form and return it to the researcher through the self-addressed envelope provided. . I am looking forward to working with you and once again, thank you for considering participating in this research.

Yours

sincerely,

Tabitha

Norton

Appendix C

Email: tabitha.norton@pg.canterbury.ac.nz

28/07/2014

Evaluation of Group Teen Triple P in post-earthquake, Christchurch, New Zealand

Information Sheet for Adolescents

Hi,

I am a Masters student at the Department of Psychology, University of Canterbury. I am currently interested in evaluating the Group Teen Triple P program which is being offered through your school.

My thesis will focus on the usefulness of the Triple P Program for promoting wellbeing in Christchurch parents and their children. The results may be used to revise and improve adolescent programmes designed to enhance family relationships in New Zealand. The anonymous results will be reported to the Ministry of Education, in a thesis publication and may be reported in other community and academic settings.

I would greatly appreciate if you would take part in my current research. Your contribution will help me to build evidence for the usefulness of programs such as these. My research will involve the following:

Your parent/caregiver(s) will be completing the Group Teen Triple P Program at your school. As part of the program you and your parents will be asked to complete short questionnaires about your family background, functioning and wellbeing that are part of the Triple P Program. Additionally, we would like you and your caregiver(s) to complete the Impact of Events Scale and Depression Anxiety and Stress Scale (DASS-21) which seeks to measure the impact Christchurch Earthquakes on family harmony and wellbeing. In total there will be two questionnaires for you to complete. These questionnaires will be happen at four separate times, (1) prior to program commencement, (2) the last session and (3) a follow-up 3 months. These self-report questionnaires would be provided to your parents by the

programme facilitator for you to complete in your own time, then sealed in an envelope and given to your parent(s) to return to the counsellor at their next session in the case of stage (2) or returned via post in stage (1) and (3).

Please note that participation is very much appreciated and is completely voluntary. It in no way affects your parent/caregiver/s eligibility to complete the Triple P Program. If you choose to participate, you have the right to withdraw from the study at any time without penalty. If you withdraw, I will do my best to remove any information relating to you, provided this is practically achievable.

Please know that I will take particular care to ensure the confidentiality of all data gathered for this study. I will also take care to ensure your anonymity in publications of the findings. Once I receive them, your name will be substituted on the questionnaires with a code number. All the data will be aggregated across the whole group of participants so you cannot be identified and will be securely stored in password protected facilities and locked storage at the University of Canterbury for five years following the study. It will then be destroyed. If you would like to receive a copy of the summary of results and final report please fill in your address on the attached consent form.

Lastly, I declare that neither I nor my supervisors have any known conflicts of interest.

Thank you for taking the time to read more about my study and I would like thank you for considering participating in this research. Please if you have any questions about the study please contact your course facilitator Suzie Hall (suzanne.hall@canterbury.ac.nz or ph 3667001 ex 8136), myself (details above) or my supervisor Dr Neville Blampied at 03 364 2199 (direct) or neville.blampied@canterbury.ac.nz. Also, if you have a complaint about the study please contact the Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

If you agree to participate in this study, please complete the attached consent form and ask your parents to return it, along with theirs, through the self-addressed envelope provided. I am looking forward to working with you and thank you again for considering participating in this research.

Yours sincerely,

Tabitha Norton

Appendix D

Email: tabitha.norton@pg.canterbury.ac.nz

28/07/2014



Evaluation of Group Teen Triple P in post-earthquake, Christchurch, New Zealand

Consent Form for Parents

I have been given a full explanation of this project and have been given an opportunity to ask questions. I understand what will be required of me if I agree to take part in this project.

I understand that my participation is voluntary and that I may withdraw at any stage without penalty.

I understand an anonymous report of the data may be given to the Ministry of Education, and the results will be presented in a thesis and may be reported in other community and academic settings.

I understand that any information or opinions I provide will be kept confidential to the researcher and that any published or reported results will not identify me.

I understand that I will receive a report on the findings of this study. I have provided my email details below for this.

I understand that if I require further information I can contact the researcher, Tabitha Norton or my supervisor Dr Neville Blampied. If I have any complaints, I can contact the Chair of the University of Canterbury education Research Human Ethics Committee.

By signing below, I agree to participate in this research project.

Name: _____

Date: _____

Signature: _____

Email address: _____

Please place this consent form, along with your adolescents consent form if applicable, in the self-addressed envelope provided to return to the researcher.

Appendix E

Email: tabitha.norton@pg.canterbury.ac.nz

28/07/2014



Evaluation of Group Teen Triple P in post-earthquake, Christchurch, New Zealand

Consent Form for Students

- ☐ (Please tick each box)
- ☐ I have read the information sheet and understand what will be required of me if I
- ☐ participate in this project. I understand that my participation is voluntary and I may choose to
- ☐ withdraw at any time.
- ☐ I agree to the publication of results with the understanding that my personal information will be kept private.
- ☐ I understand that I can receive a report on the findings of the study if I choose to. I have written my email address below for the report to be sent to.

I understand that I can get more information about this project from the researcher and I can contact the

University of Canterbury Ethics Committee if I have any complaints about the research.

I agree to participate in this research any my parents have also given consent on

their consent form. Full name (student) _____

Date _____

Email address for report _____

Please ask your parents to return your consent form along with theirs through the self-

addressed envelope provided.

Appendix F



HUMAN ETHICS COMMITTEE

Secretary, Lynda Griffioen
Email: human-ethics@canterbury.ac.nz

Ref: 2014/15/ERHEC

11 April 2014

Tabitha Norton
Department of Psychology
UNIVERSITY OF CANTERBURY

Dear Tabitha

Thank you for providing the revised documents in support of your application to the Educational Research Human Ethics Committee. I am very pleased to inform you that your research proposal "Evaluation of Group Teen Triple P in post-earthquake Christchurch, New Zealand" has been granted ethical approval.

Please note that this approval is subject to the incorporation of the amendments you have provided in your email of 10 April 2014.

Should circumstances relevant to this current application change you are required to reapply for ethical approval.

If you have any questions regarding this approval, please let me know.

We wish you well for your research.

Yours sincerely

A handwritten signature in dark ink, appearing to read 'N Surtees'.

Nicola Surtees
Chair
Educational Research Human Ethics Committee

"Please note that Ethical Approval and/or Clearance relates only to the ethical elements of the relationship between the researcher, research participants and other stakeholders. The granting of approval or clearance by the Ethical Clearance Committee should not be interpreted as comment on the methodology, legality, value or any other matters relating to this research."

F E S